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# WOMEN SMALL FARMERS IN THE CARIBBEAN

Brenda Kleysen
Editor

AREA OF CONCENTRATION IV
SUSTAINABLE RURAL DEVELOPMENT

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# PREFACE

During the last five years, the Inter-American Institute for Cooperation on Agriculture (IICA), as the implementing agency, and the Inter-American Development Bank (IDB), as the financing agency, have undertaken an extensive program to analyze agricultural policies and rural women as food producers in Latin America and the Caribbean under two Technical Cooperation Agreements entitled Program for the Analysis of Agricultural Policies vis-a-vis Women Food Producers in Central America and Program for the Analysis of Agricultural Policies vis-a-vis Women Food Producers in the Andean Region, the Southern Cone and the Caribbean.

The first Technical Cooperation Agreement was signed in 1991 and implemented in 1992-1993 in six countries in Central America under the auspices of the Council of Central American Ministers of Agriculture. Countries participating in the program included Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua, and Panama.

During the Summit Meeting of First Ladies on the Economic Advance of Rural Women held in Geneva, Switzerland in February 1992, a group of First Ladies requested that IDB and IICA extend the program being carried out in Central America to include their countries. In response to this request, a second agreement was signed, and the program was extended to 12 countries in South America and the Caribbean including: Barbados, Bolivia, Brazil, Colombia, Ecuador, Guyana, Jamaica, Paraguay, Peru, Suriname, Uruguay and Venezuela.

The IICA/IDB program is directed toward improving the socioeconomic conditions of women as food producers and in increasing their incomes and productivity and, as a result, making the agricultural sector more efficient and improving food security in the region. Key activities included research on agricultural policies and the participation of rural women in small-farm systems and agricultural production, and the formulation of recommendations and proposals for promoting gender-equitable agricultural and rural development policies and programs.

Central to the program was the dissemination of program findings and recomendations. Parallel to the research activities, the program brought the topic of women as food producers and gender equity within the sector to the attention of institutions in the countries. Program results were presented to political and technical decision-making bodies in an effort to inform and seek consensus on the recommendations and proposals that were made.

The results of the study in Central America were submitted to two meetings of the Ministers of Agriculture of the member countries of the integration process in this region: in Panama, on the occasion of the Summit of Presidents on agriculture held in December 1992, and in Managua, in June 1993. They were also submitted to and discussed by the Regional Commission on Social Action (CRAS).

In the Andean Region, the study was presented in national seminars attended by representatives of public and private institutions in the agricultural sector, the goal being to reach consensus on the recommendations put forth and to promote their implementation. The project culminated with the presentation of the results in a regional seminar and teleconference held in Santa Fe de Bogota in June 1994, which received support from and were promoted by the First Ladies of Colombia and Bolivia and were attended by the Ministers of Agriculture and their representatives from the five countries of the Andean Region.

In the Caribbean, the results were presented in national seminars, and at a regional seminar held in Kingston, Jamaica in August 1994, in which the Minister of Agriculture and Minister of Labor from that country, representatives of other Ministers of Agriculture and the First Ladies and their representatives of the four countries included by the Program, the First Lady of St. Lucia, as well as representatives of international agencies, the principal NGOs in the sector and women farmers participated. The results were also presented to the CARICOM during the first quarter of the same year.

In the Southern Cone, the project culminated with a regional seminar held in Montevideo, Uruguay in September 1994, which brought together the First Lady of Uruguay (hostess of the seminar); the Minister for Women's Affairs of Paraguay; ministers, vice ministers and managers of agricultural sector institutions from Brazil, Paraguay and Uruguay; representatives from NGOs that participate in the network of the Cooperative Program for the Rural Development of the Countries of the Southern Area (PROCODER), and representatives of women's organizations.

*Rodolfo Martinez Ferrate*
*Director of Rural Sustainable Development*
*IICA*

# IICA/IDB PROJECT TEAM

The IICA/IDB Rural Women Food Producers Program was undertaken by a large team of economists, sociologists, agronomists and rural development specialists under the direction of Manuel Chiriboga and Fabiola Campillo from the Inter-American Institute for Cooperation on Agriculture, and supervision of Norma Rey de Marulanda and Maria Elisa Bernal from the Interamerican Development Bank.

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# ACKNOWLEDGEMENTS

IICA, IDB and the team appointed by these institutions to carry out the project wish to acknowledge all those who made its implementation possible: to the First Ladies of the countries of Latin America that participated in the Program, for promoting and providing institutional support for the initiative; to the Ministers of Agriculture and to the professionals on their technical staffs, who, by contributing their time and expertise, ensured technical excellence; to the coordinators, for their analytical support and enthusiasm in the dissemination of the results of the project, and for organizing the regional seminars; to the consultants, who patiently dedicated more time than first estimated in preparing the research and the national summaries and in reaching consensus on the recommendations of each of their countries; to the secretarial staff that collaborated in the preparation of the national and regional publications; and to those who conducted the surveys and processed the information.

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# ACRONYMS AND ABBREVIATIONS

| | |
|---|---|
| ACB | Agricultural Credit Bank (Jamaica) |
| ADA | Association of Development Agencies |
| AMC | Agricultural Marketing Cooperation (Jamaica) |
| BADC | Barbados Agricultural Development Corporation |
| BADMC | Barbados Agricultural Development and Marketing Company |
| BAS | Barbados Agricultural Society |
| BASIS | Barbados Agricultural Statistical Information Service |
| BIDC | Barbados Industrial Development Cooperation |
| BMC | Barbados Marketing Corporation |
| BNB | Barbados National Bank |
| CARDI | Caribbean Agricultural Research and Development Institute |
| CARICOM | Caribbean Common Market |
| EEC | European Economic Community |
| FAL | Federation of Agrarians and Labourers |
| FAO | United Nations Food and Agriculture Organization |
| FSO | Fund for Special Operations |
| GDP | Gross domestic product |
| GMC | Guyana Marketing Corporation |

| | |
|---|---|
| HAP | Hillside Agricultural Project |
| HFASP | Hillside Farmers Agricultural Support Project |
| ICRW | International Center for Research on Women |
| IDB | Inter-American Development Bank |
| IFAD | International Foundation for Agricultural Development |
| IICA | Inter-American Institute for Cooperation on Agriculture |
| IMF | International Monetary Fund |
| IPED | Institute of Private Enterprise Development |
| LBB | Landbou Bank (Suriname) |
| MAFF | Ministry of Agriculture, Food, and Fisheries (Barbados) |
| NARI | National Agricultural Research Institute (Guyana) |
| NDF | National Development Foundation |
| NGO | Nongovernmental organization |
| PLANLAC | Plan of Joint Action for Latin America and the Caribbean (IICA) |
| RADA | Rural Agricultural Development Authority (Jamaica) |
| SAP | Structural Adjustment Policies |
| SIMAP | Social Impact Amelioration Programme (Jamaica) |
| SRC | Scientific Research Council (Jamaica) |
| UNCED | United Nations Conference on Environment and Development |
| UNIFEM | United Nations Development Fund for Women |
| USAID | United States Agency for International Development |
| UWI | University of the West Indies |
| WAND | Women and Development |
| WID | Women in Development |

# INTRODUCTION

## 1. BACKGROUND

The IICA/IDB Program for the Analysis of Agricultural Policies vis-a-vis Women Food Producers in Latin America and the Caribbean was initiated in 1992 at a time when several factors were indicating the importance of studying women and food production.

Several case studies undertaken by researchers during the 1980's on rural women were providing empirical evidence as to the significant role that women play in small-farm production. A number of hypotheses were put forth as to the nature of women's participation and changes that were occurring to the small-farm subsector, however, a lack of regionwide data impeded cross-country comparisons as to the characteristics and trends of women in small-farm food production.[1] Data on employment by sector analyzed over a 30 year period by the IDB (Economic and Social Program in Latin America 1990) indicated that the relative participation of women to men had increased in the agricultural sector, and provided plausibility to suggestions that small-farm production was becoming increasingly feminized.

After approximately a decade of debt crisis and then structural adjustment, poverty levels in both urban and rural areas had increased and the living conditions of the rural population decreased. Concern for food security was an important item on the agenda of the ministries of agriculture in the region. The small-farm agriculture sector was indicated as vital to supplying local and domestic markets, and, according to case studies on the topic, was one in which women had a leading role in food production and in ensuring household survival.

Within this context, research aimed at determining the scope of women's contribution to food production and identifying the principal obstacles to their

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1 The IDB document on working women in Latin America, published in the 1990 Report on Economic and Social Progress in Latin America is a good indicator of the most up-to-date thinking on this topic at that time.

making this contribution was necessary to provide policy makers and institutional decision-makers with the technical inputs required for improving women's conditions, and thereby contribute to increased farm productivity, the regional food supply, as well as social equity and well-being.

## 2. OBJECTIVES

### *General*

Describe and analyze the role of women in, and their contribution to, small-farm agricultural systems, with special emphasis on the production of food for domestic consumption, to provide guidance to the participating countries on gender-oriented agricultural and rural development policies and programs.

### *Specific*

- Assess and evaluate the contribution of women in the production, processing and marketing of agricultural products.
- Evaluate the effects of sectoral policies and institutional systems on women food producers, and formulate policy recommendations aimed at eliminating the obstacles they face.
- Analyze the participation of women in the adoption and use of technology and in the processing and marketing of agricultural products.

## 3. RESEARCH METHODOLOGY

### *Research Bases*

A comprehensive review of the case studies on rural women in the region, as well as the hypothesis and concepts put forth by earlier writers, oriented the research design and provided the basis for the identification of women food producers within the greater population of rural women. Hypotheses and affirmations adopted by the IICA/IDB research include:

- People of both genders and all ages participate in the agricultural systems of Latin America and the Caribbean; women play a significant role in the sustainability of such systems.

- On small farms, women participate in the production, handling and processing of foods, given their role as producers and the responsibility vis-a-vis reproduction within the household.

- Women participate in the production of food throughout the agricultural cycle, including the processing and marketing processes; the effectiveness of this participation is determined by the extent to which the members of the production units have access to and control over resources and decisions.

- Women devote a large portion of their time every day to agricultural tasks and contribute significantly to the generation of income, be it monetary or in kind.

- Agricultural sector institutions and policies do not promote the participation of women. The gender biases inherent in same hinder such participation and affect negatively the productivity of the work and the position of women in rural societies.

- Women food producers participate in decisions related to the management of local agricultural processes, but their participation varies depending on the type of decisions involved.

## *Population Studied*

The research addressed the general situation of women in rural areas, however, the analysis concentrated on women on small farms who spend most of their time producing food for domestic consumption. Basic secondary data from the countries (taken from population and agricultural censuses and household surveys), as well as earlier studies on the topic were analyzed. Primary data was collected in more than 2000 interviews with adult women on the farms studied.

These interviews were not originally included in the agreement signed by IICA and IDB. However, the need to know more about the dynamics of the population to be studied led both institutions to include the gathering of primary data, for two purposes: a) to determine the level of participation of the different members of the family in the production, processing and marketing processes; and b) to ensure that women, who are not usually considered as informants in the preparation of rural statistics, would have the opportunity to express their own views on the socioeconomic conditions in which they live.

The surveys, and in certain cases group interviews, were conducted in regions and communities. In each country studied in the Andean Region, Southern Cone and Caribbean, at least 150 surveys were conducted on farms located in different geographic and agroecological zones.

### *Products and Geographic Zones*

In each country, three of the principal agricultural products included in the basic family food basket were selected. In order to permit comparability, the study included some products common to all countries within the subregion.

In the Andean Region, the common products were corn, potatoes and milk; in Central America, corn and beans; in the Southern Cone, livestock and beans; and in the Caribbean, vegetables, sweet potatoes and cassava. The purpose was to make a detailed study of the participation of women and other members of the household in the production, processing and marketing of these products, even though information on all the products produced on the farms was gathered.

The geographic zones were selected on the basis of the variety of agroecological systems they encompassed and on the existence of small farms producing the crops selected; also, these zones had been covered in previous studies, thus ensuring that the sample would be supported by further data.

### *Measurements and Methodologies*

Aware of the shortcomings in the statistics in the countries, emphasis was placed on the quantification of the research results and on measuring the contribution of different people to agricultural production and household welfare. In an effort to overcome the underestimation and invisibility of women in the statistics, the research team developed a number of methodologies that would make it possible to measure the scope of women's contribution and re-calculate official figures in light of the reality found during the course of the study. Quantification efforts and methodologies of mention include:

Women's contribution to household income. Aware of the difficulties involved in quantifying income in rural areas, and especially for small farms (which have several sources of income), a simple methodology was used based on the opportunity cost of labor, taking into consideration the hours worked in monetized and non-monetized sources of income in agricultural production as well as renumerated activities from wage labor or the sale of handicrafts. The percentage share contributed by men and women was then calculated.

Re-estimation of the economically active female population in the agricultural sector. Underestimation of womens' participation is one of the most gender-biased aspects in the gathering and processing of official statistics on the agricultural sector. As a result, womens' contribution is largely invisible. In response, the project undertook a series of re-estimations which, on the basis of official census data and household surveys, offered a more realistic picture of the scope of the participation of women in the rural economy. Various methodologies were used depending on the availability of information in the countries. Some of these were:

- Analyze the secondary activities carried out by the women officially classified as economically inactive (when the question appeared on census or household survey questionnaires), and to add to the list of women classified as active, those who claimed to carried out some agricultural production activity.

- Assume that one adult women in each small farm household worked in agricultural production so that same could be sustainable, and to apply this figure to some percentage of the total number of small farms in the country.

- Apply to the working-age female population involved in agriculture the average percentage of economic participation obtained in the survey conducted by the project.

- Retabulate results of special modules used earlier in household surveys.

Women's contribution to agricultural Gross Domestic Product. This estimation was made in the Andean countries, and was based on the number of hours worked and the average number of days worked per year by the women food producers. In order to determine the total contribution, the average agricultural wage at 1991 current prices was applied to these numbers. Subsequently, that figure was contrasted with that of the total of the sectoral GDP, and the participation by gender was established.

Participation in decision making. The survey analyzed decision-making within the household, with a distinction being drawn among those made primarily by men, those made jointly by men and women and those made primarily by women, in a wide variety of areas including the selection of seeds, the use of income and requests for credit, among others.

Share in the total amount of work contributed by the different members of the household. One of the goals of the surveys was to quantify the relative contribution of different members in the household to the tasks undertaken on the farm and in the household in the different agricultural, livestock, artisanal, reproductive and community activities. Based on data provided by the women surveyed the average frequency of participation for various members was calculated (adult men, women other than those interviewed, boys and girls). The intensity of this participation was also estimated in various countries based on the time dedicated by household members.

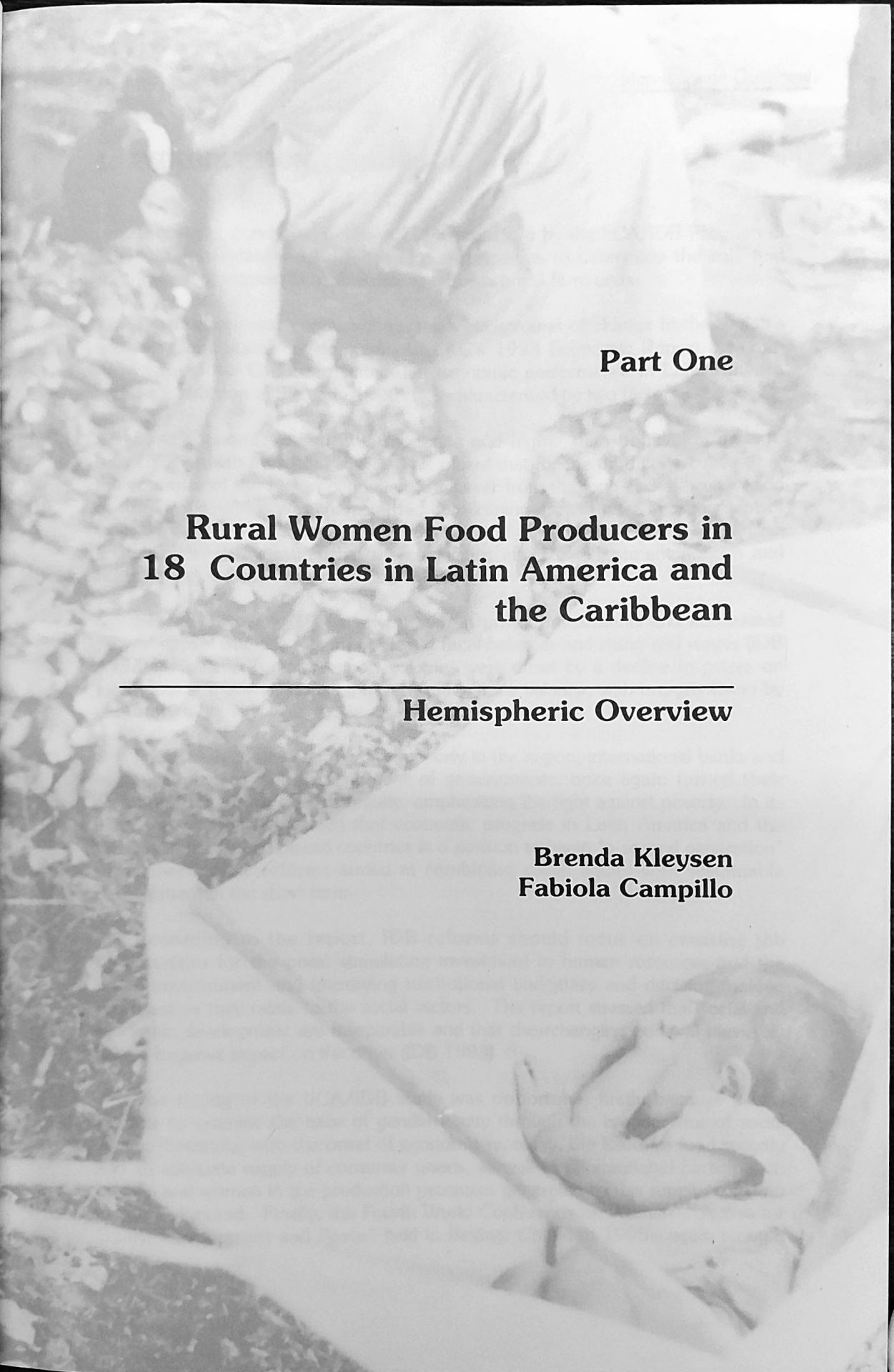
## 4. CONTENTS OF THE BOOK

The IICA/IDB Program for the Analysis of Agricultural Policies vis-a-vis Women Food Producers in Latin America and the Caribbean has generated a large base of data and a wealth of comparative information on rural women, especially women in their role as small farmers and food producers. Some 48 documents contain the results from the 18 countries participant in the Program. This data is useful to researchers and academicians, as well as for the formulation of institutional programs and working strategies.

In order to facilitate this process, in the first part of the book, the reader will find a summary of the main findings and synthesis of general trends in Latin America and the Caribbean vis-a-vis the subject under study, and of the differences found among the 18 countries covered in the research. This analysis provides an overview of the topic in a particular moment in history in the region, and is a point of departure for follow-up studies in the future or comparisons with similar processes studied in other regions of the world such as Africa and Asia.

In the second part of the book, a summary and comparative analysis of the findings in each of the countries participant in the project in the Caribbean are presented, as well as the conclusions, recommendations and the project proposals.[2]

2 See Kleysen (ed.), Productoras Agropecuarias en America del Sur (San Jose, C.R., IICA 1996) for a similar presentation on the results from the Andean Region and the Southern Cone; and Chiriboga, Grynspan and Perez, Mujeres de Maiz (San Jose, C.R., IICA 1995) for results from Central America.



Part One

# Rural Women Food Producers in 18 Countries in Latin America and the Caribbean

## Hemispheric Overview

Brenda Kleysen
Fabiola Campillo

# 1. INTRODUCTION

This study, conducted between 1992 and 1994 by the IICA/IDB Program in 18 Latin American and Caribbean countries, aims to determine the role and contribution of women in agricultural systems on small farm units.

The research was conducted against a background of change in the region's economic and social development. ECLAC's 1993 Economic Report on Latin America and the Caribbean stated that economic performance in Latin America and the Caribbean in the early 1990s was characterized by two factors.

First, economic growth was moderate and higher than population growth, with GDP growth averaging 3.4%. This meant that for the third consecutive year, the countries of the region continued to recover from the long and difficult period of the 1980s, which was characterized by declining growth rates and payment of external debt. In addition, with the exception of Brazil, prices began to stabilize (ECLAC 1994), indicating that the cumulative effect of adjustment policies and reforms adopted earlier were beginning to be felt.

Second, the early 1990s saw growth in private investments and accelerated flow of capital into the region, improved fiscal balances and rising real wages (IDB 1993). However, greater export volumes were offset by a decline in prices on international markets, resulting in a negative trade balance, with imports rising by almost 10%.

Faced with continued growth of poverty in the region, international banks and organizations, as well as a number of governments, once again turned their attention to the issue of social equity, emphasizing the fight against poverty. In its 1993 report, the IDB stated that economic progress in Latin America and the Caribbean (LAC) had placed countries in a position to begin "a second generation" of socioeconomic reforms aimed at combining social equity with sustainable development in the short term.

According to the report, IDB reforms should focus on creating job opportunities for the poor, stimulating investment in human resources and the urban environment and improving institutional budgetary and decision-making processes as they relate to the social sectors. The report stressed that social and economic development are inseparable and that shortchanging one will inevitably have a negative impact on the other (IDB 1993).

The timing of the IICA/IDB study was opportune, firstly because it was possible to examine the issue of gender equity through the broader lens of social equity. Secondly, with the onset of economic recovery, the issues of food security and an adequate supply of consumer goods, as well as differentiated participation by men and women in the production processes generated by this supply, could no longer be ignored. Finally, the Fourth World Conference on Women - "Action for Equity, Development and Peace" held in Beijing, China, in 1995 - again brought

the issue of discrimination against women and inequality between the sexes to the forefront of public debate.

As the IICA/IDB research program in 18 countries was coming to a close, the UNDP was writing its fifth Human Development Report (1995). This presented two new, mixed indexes for measuring equality between men and women, the Women's Development Index (WDI) and the Women's Empowerment Index (WEI), both useful for analyzing the results of the research. These indexes are described in Table I.1.

Interestingly, these indexes have a significant impact on how countries rank in their levels of human development. Costa Rica, for example, ranks 28th in the Human Development Index (HDI) but falls to 115 in the WDI, while El Salvador moves from 115 in the HDI to 76 in the WDI. This shows that the benefits of development and growth are not distributed equitably between men and women. For that to happen, firm political commitment and explicit government policy and goals for combating gender discrimination are necessary.

Notable differences have emerged in the countries studied. One group contains countries with a higher human development level, such as Barbados, Costa Rica, Panama, Venezuela and Uruguay, all ranking among the first 50 countries in the HDI. At the other extreme are Bolivia, El Salvador, Honduras, Guatemala, Guyana and Nicaragua, which are grouped between positions 105 and 115 of a total of 174 countries. In general, these differences are maintained in the WDI, although the Latin American countries have progressed in their efforts to eliminate discrimination against women. In fact, important progress can be noted in the WDI of countries that rank low in the HDI, but rank higher in the WDI, whether due to the impact of legislation, the participation of women in decision making and legislative processes, or their greater presence in education and the labor market.

The situation in LAC is complex. In addition to the differences in human development levels and efforts to improve the situation of women, there are important geographic and demographic differences. The region includes countries with high percentages of indigenous people, such as Bolivia, Ecuador, Guatemala and Peru. There are also countries with a rich mixture of ethnic groups and languages, such as Suriname. For this reason, every effort has been made in this book to avoid making categorical statements of hemispheric scope, presenting instead trends and differences of behavior among countries and subregions, which can be used for formulating proposals for action and policy making. (See the subregional comparative syntheses for a complete exposition.)

# 2. RURAL WOMEN FOOD PRODUCERS

Who are the women food producers examined in the IICA/IDB studies? Basically, they are adult women whose primary economic activity is producing agricultural goods, mostly for own-consumption, on small, family-run farms dependent primarily on the work of their members and with few resources. In some parts of Latin America, these farm units form part of what is generally referred to as "campesino" or peasant economy.

## *Socioeconomic Characteristics of Rural Women*

In the 18 countries under study, there is a difference between urban countries and those considered primarily rural. In LAC, Bolivia, Paraguay and the Central American countries are rural, with a rural female population higher than or close to 50% of the total female population.

These countries, especially Honduras, Guatemala, Nicaragua, Bolivia, Peru and Paraguay, have the highest fertility rates among rural women, indicating that they are rural societies with large families where conjugal relationships with many children predominate (Table I.2).

Some countries face both the economic changes prevalent in the region and continued poverty and social inequality, due to serious armed conflict in the countryside (Colombia, El Salvador, Guatemala and Peru, for example). These conflicts have altered household structure and have brought the percentages of rural households headed by women up to between 15% and 27% for the countries of LAC. In Barbados and Jamaica, the levels are much higher. Rather than representing the aforementioned economic and sociopolitical problems, however, the number of female-headed households reflects long-standing family and cultural structures related to the social organization of populations in the Caribbean.

Some of the sociodemographic characteristics identified for the rural sector in LAC (Campillo 1995a) are:

- Rural women's fertility levels have fallen, although the gap between rural and urban women has grown. In some countries (e.g., Bolivia, El Salvador, Guatemala, Honduras, Paraguay and Peru), the fertility rate in rural areas is more than six children per woman. This is similar to overall national rates in the early 1970s (FLACSO 1995), a lag of almost a quarter of a century for these countries. Rates are particularly high in Central America and in countries with a high proportion of indigenous people.

- The percentage of the population within the economically active category has risen due to declining fertility and infant mortality levels, which has put

greater pressure on the labor market. The female population between the ages of 15 and 64 grew from 49% of all rural women in Latin America in 1970 to 54.7% in 1995.

- Marriage continues to be the most common form of conjugal relationship. However, in some regions such as Central America (with the exception of Costa Rica), between 23% and 28% of the female population indicated "common law relationship" as their marital status. It is more common for couples to form households at a younger age in rural areas than in urban areas.

- Rural households are large and composed of groups of nuclear families. Fauné's work on Central American families found that "the household is less and less the domain of a nuclear family: what is emerging is a space of shared living conditions and unions of one or more bi-parental or single-parent nuclear families, linked by family relationship, friendship or solidarity" (Fauné 1994: 110). The development of new family arrangements is associated with the migratory processes which forced people to leave rural areas during the economic crisis of the 1980s, and with armed conflicts which displaced and turned thousands of women and children into refugees in Central America, Peru and some parts of Colombia.

- Female children and young girls have improved their educational levels (FLACSO 1995: 99). However, illiteracy among adult women continues to be very high, especially in countries with a large indigenous population such as Guatemala (60% illiteracy among rural women), Bolivia (50%), and Peru (45.6%). In Guatemala, the illiteracy rate among indigenous women is 74%; in Paraguay it is 75.6%.

- Basic health services are still relatively inaccessible. In Bolivia, El Salvador, Nicaragua, Paraguay and Peru, less than 25% of the population has access to running water.

Indicators for health, education and fertility reveal a close correlation between a large indigenous population and dire poverty for rural women. They also demonstrate the large gap between rural and urban conditions, as well as the discrimination to which women of certain classes and ethnic groups of LAC are subjected.

## *Sociodemographic Profile of Women Food Producers*

The sociodemographic profiles of the women targeted by this study vary. This may be because the information comes from a heterogeneous socioeconomic segment: women in rural households on small farm units whose main source of income is agricultural activity.

In addition, the information used for analysis was provided by the women themselves, who were selected for the survey and defined as adult women with primary responsibility in the home's socioeconomic activities. With this in mind, the profile of these women, by subregion, can be analyzed as follows:

- Age. Rural women food producers studied are of mature age. In the Andean region, the average age was 39. In the Caribbean countries and Uruguay, the average age was 40, while in Brazil and Paraguay women were younger.

- Type of conjugal relationship. Marriage continues to be the predominant conjugal relationship. Nonetheless, in most of the countries studied, there are numerous common law unions, particularly in the Caribbean, Nicaragua and in several Andean countries including Bolivia (83%), Colombia (31%) and Venezuela (45%).

- Household head. In line with the lack of formalized conjugal relationships, the research found that the percentage of female household heads is higher than indicated by official statistics. This is particularly noticeable in the Caribbean countries, where it ranges from 34% in Suriname to 57% in Jamaica. Of all women surveyed in the Andean countries, 26.4% said they were household heads and of those, 6% said that they did not have a permanent partner. In Costa Rica, Ecuador, El Salvador, Guatemala, Guyana, Venezuela and northeastern Brazil, there was a high frequency of women household heads in the population studied. In Uruguay and Paraguay, the percentage of women household heads was low in rural areas.

- Education. With the exception of Uruguay, where rural women are better educated than men and where the general educational level is quite high, the study found two types of biases against rural women food producers: a) they are disadvantaged as rural women compared with urban women; and b) they are disadvantaged as women compared with men. As noted above, illiteracy rates are generally very high in the region. Only 49% of the women surveyed in the Andean countries had received primary education. Educational levels are also low in Paraguay and southern Brazil. In Central America, the lowest educational levels among rural women were found in Guatemala, Honduras and El Salvador. Progress has been made in Nicaragua after the literacy campaign of the 1980s. On the other hand, the Caribbean countries have little or no illiteracy (with the exception of Suriname, at 13%). Of the women surveyed in Guyana, 78% have received primary education, as have 67% in Jamaica. In Barbados and Suriname, 35% and 27%, respectively, have received secondary education.

In summary, it can be stated that there is a segment of rural women food producers in LAC made up of adult women with a large number of dependents and a high degree of economic responsibility. One in every four is a household head, due in part to seasonal migration of men. In addition, the large number of common-law unions in households headed by women means that a large

percentage of rural women food producers on small farms are in a weaker position to access production resources, because their situation and their rights are not covered by legislation, be it family or civil law.

Aggravating the situation is the fact that the women in this segment tend to have extremely low educational levels. There is a high rate of illiteracy and fewer than 50% have had primary education. As a result, most women food producers do not have the educational skills they need to fulfill their productive and reproductive roles and to participate as full citizens in modern society.

# 3. WOMEN FOOD PRODUCERS' INVISIBILITY AND PARTICIPATION IN AGRICULTURE

Throughout Latin America and the Caribbean, women food producers make a major contribution to rural economies and to the economic and social well-being of their families. Much of their work is carried out on small farms, where it is neither remunerated nor recorded in labor force statistics.

Women devote much of their time to daily domestic tasks, including family care and household chores. They also devote a considerable amount of time to crop and livestock production on the farm and to marketing these products. They maintain household gardens and prepare a number of other food and non-food items for sale or home consumption. These activities contribute directly to family income.

Time-use studies undertaken as part of the IICA/IDB project in the Andean region and Central America reveal that women work 14 to 18 hours a day, devoting half their time to reproductive activities and the other half to productive activities: 4.5 hours to domestic chores, 2 hours to tending livestock, and approximately 1.5 hours to the household garden and making products for sale. Women tend to undertake activities concurrently, e.g., weeding gardens while taking care of their children. As a result, the total time devoted to any one activity should be considered conservative.

In the Andean region, estimates by the women surveyed indicated that the women in the family contributed approximately one-half of the total time (including that of men) devoted to crop production, and nearly three-quarters of the time devoted to livestock production and marketing. In most cases, the manufacture of products is undertaken exclusively by women (see Table I.3).

In spite of their labor in productive activities, many women on small farms are not considered part of the economically active population. In general, their contribution to agricultural production, especially food production, is poorly represented in labor force statistics.

Over the last two decades, women's participation in the LAC workforce has increased substantially. It is estimated that between 1970 and 1990, their share of the job market increased from 24% to 29% (United Nations 1991). In rural areas it increased from 12% to 19% (CELADE 1992).

Higher figures for women working in rural areas can be attributed in part to the greater number of women entering the labor market, where their presence is more easily detected by census and survey takers. More employment possibilities in non-traditional agriculture (especially harvesting and processing, which often favor women) have increased the number of women working in rural areas. Increased migration of men from rural areas and armed conflicts in several

countries have also left more small farms in the hands of women, increasing their visibility in official surveys.

Because many rural women work without wages on family farms, most are invisible in labor force statistics. While official statistics recognize unpaid family labor as an occupational category, many women who work in productive activities are not included. There are many reasons for this: statistical definitions of work or occupation and time reference periods may make it difficult to include women's work; women may not recognize themselves as workers or may consider their work merely an extension of their household duties; alternatively, male household heads surveyed may not recognize the labor of their wives and companions as "work".

Women's invisibility in small-farm production is a serious issue. Policies and programs aimed at increasing agricultural productivity do not target the right population and, as a consequence, are of limited effectiveness. Similarly, services and programs that specifically target women but do not recognize their employment in agriculture are not oriented toward the right activities. It is unlikely that they will be sustainable.

Reestimations undertaken as part of the IICA/IDB study demonstrate the extent to which official statistics underrepresents women's participation in agriculture, as can be seen in Figure I.1 and Table I.4.[1/]

- In Central America, official figures put the number of women who are economically active in agriculture at 184,000. Reestimations indicate this figure is more than 800,000 and that countries have underestimated the number of working women by 125% to 500%, with Guatemala the most serious case.

- In the Andean region, the IICA/IDB study revealed 5 million women invisible in agriculture, bringing women's employment levels in the rural sector to 10 million. Under-recording is most severe in Colombia and Venezuela.

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1 Various methods were used to review women's participation in agriculture, depending on the information available in each country. The general approach was to reclassify as economically active some part of the rural female population classified as inactive. Adding this number to those classified as active permitted a new estimation of women's employment to be made.

Official definitions of employment/work were not considered in these estimations. The results of the IICA/IDB surveys show, however, that these estimates tend to the conservative. In some countries, a retabulation of unpublished data from official sources was all that was required. For example, in Barbados, the 1990 Labor Force Survey indicated that there were 1900 economically active women in the agricultural sector. Unpublished tabulations from the 1989 Agricultural Census, however, identified 6,714 holdings operated by women, 4,411 paid permanent workers and 1,456 paid part-time workers.

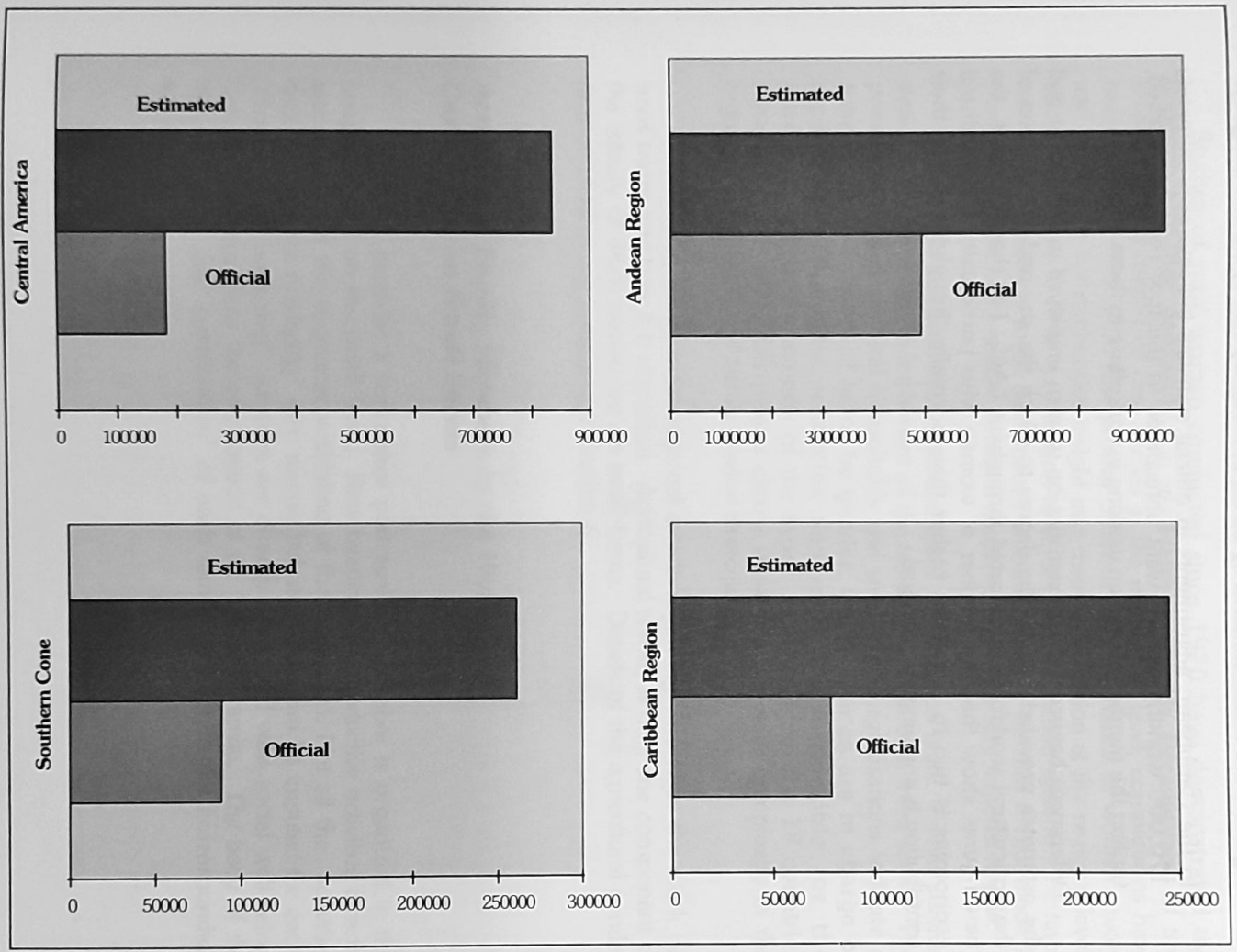


***Figure I.1. Women's participation in agriculture.***

**Source:** Table I.4.

- In the Southern Cone, as a result of new estimates in Paraguay and Uruguay, women's employment rose from 88,000 to more than 250,000. Figures were underestimated by 254% in Paraguay and by 69% in Uruguay.

- In the Caribbean, adjustments in official statistics indicate approximately 170,000 working women went unrecorded in the four countries studied, tripling the number of women working in agriculture in these countries.

Differences between official statistics on women employed in agriculture and the estimates provided indicate the degree to which the size and composition of the agricultural workforce is distorted throughout LAC. For the most part, the new figures show that the number of women who participate in agricultural economies is two to five times higher than normally thought and that their contribution is anything but marginal.

# 4. THE ORGANIZATION OF LABOR ON SMALL FARMS

Studies of rural women conducted since 1970 have demonstrated the importance of their participation in small-farm households. Because most of this research has consisted of case studies at the micro-local level, comparisons have been difficult. The IICA/IDB project confirms the importance of women's work and provides a comprehensive insight into their participation at the regional level, and an overview of their contribution to small-farm production systems. Perhaps one of the project's most significant contributions may be that it has made it possible to make comparisons between countries and to identify regional trends.

Small farms are both economic and social reproduction units. Family survival depends on the ability to implement all the tasks involved in both these areas. The prevailing models of rural households and small-farm organizations indicate a simple, rigid division of labor by gender, where women are in charge of reproductive/domestic activities and men are responsible for the economic/productive aspects of the farm. Findings from the 18 countries surveyed in the IICA/IDB project clearly show much greater complexity in the organization of labor and family survival strategies.

This section summarizes regional trends regarding who does the work on small farms and how it is organized. Agricultural activity is only one component of the totality of work carried out on small farms. Details of the agricultural gender division of labor are presented in Section 6.

## *Activities of Family Members in the Work Carried Out on Small Farms*

Figure I.2 provides a conceptual portrayal of how labor is organized in the household and on the small farm. Row headings list productive activities directly associated with the economic well-being of the household. Not all the activities denoted "income producing" earn money but an income can be imputed for each. "Non-income producing" activities are directly associated with social well-being. Column headings show the composition of an "average" family. The body of the table indicates the "contribution" of each family member to the corresponding activity.[2]

2 "Contribution" can be quantified: it is the relative probability of participation in a particular activity, multiplied by the total household time devoted to that activity, multiplied by productivity; or more simply, the time devoted by a particular family member adjusted for productivity.

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### *Activities*

Figure 1.2 shows the activities taking place on the units surveyed. Small-farm households engage in a variety of productive activities with a direct bearing on the income and economic well-being of the household, as well as a variety of non-income producing activities affecting social well-being and family reproduction.

Crop and livestock production are key economic activities. In virtually all the farms surveyed, this includes small animals; on many it includes large animals as well. The income derived from farming may be monetized or non-monetized to the extent that it is marketed or produced for own-consumption. Most small farms surveyed in Latin America and the Caribbean were semi-commercial, producing for the market as well as for own-consumption, although the extent to which each occurs varies greatly.

Household gardens, as distinguishable and separate activities from farm production, are important in Brazil, Costa Rica and various other countries. In Central America, small animals are often included in household garden activities. These gardens and the animals kept in them often represent the only source of protein, and are an important source of diversity in the family diet. The surplus from these gardens can be sold and in Nicaragua, income from these gardens is used to alleviate liquidity problems in the purchase of farm inputs.

In addition to agricultural activities, small-farm households engage in a number of other productive endeavors. Food may be processed, either as another step in the chain of crop or livestock activities or as a separate manufacturing activity using materials purchased elsewhere. Handicrafts may also be produced. The extent to which these activities are practiced varies greatly throughout LAC. On some farms, they are specialized activities while on others they are more sporadic. Production requirements and community traditions play a determinant role.

Off-farm labor is another important source of income and many family members opt for this kind of employment on a daily, seasonal or temporary basis. A strong tendency towards off-farm labor was noted in many of the households surveyed, ranging from being a major contributor to family income to an occasional, complementary activity.

Key non-income producing activities directly affecting the social well-being of the household and its longer-term economic well-being include household chores and family care, educational activities and participation in a variety of social, community development and production-oriented organizations. These activities are common to all households, and family members participate in different ways.

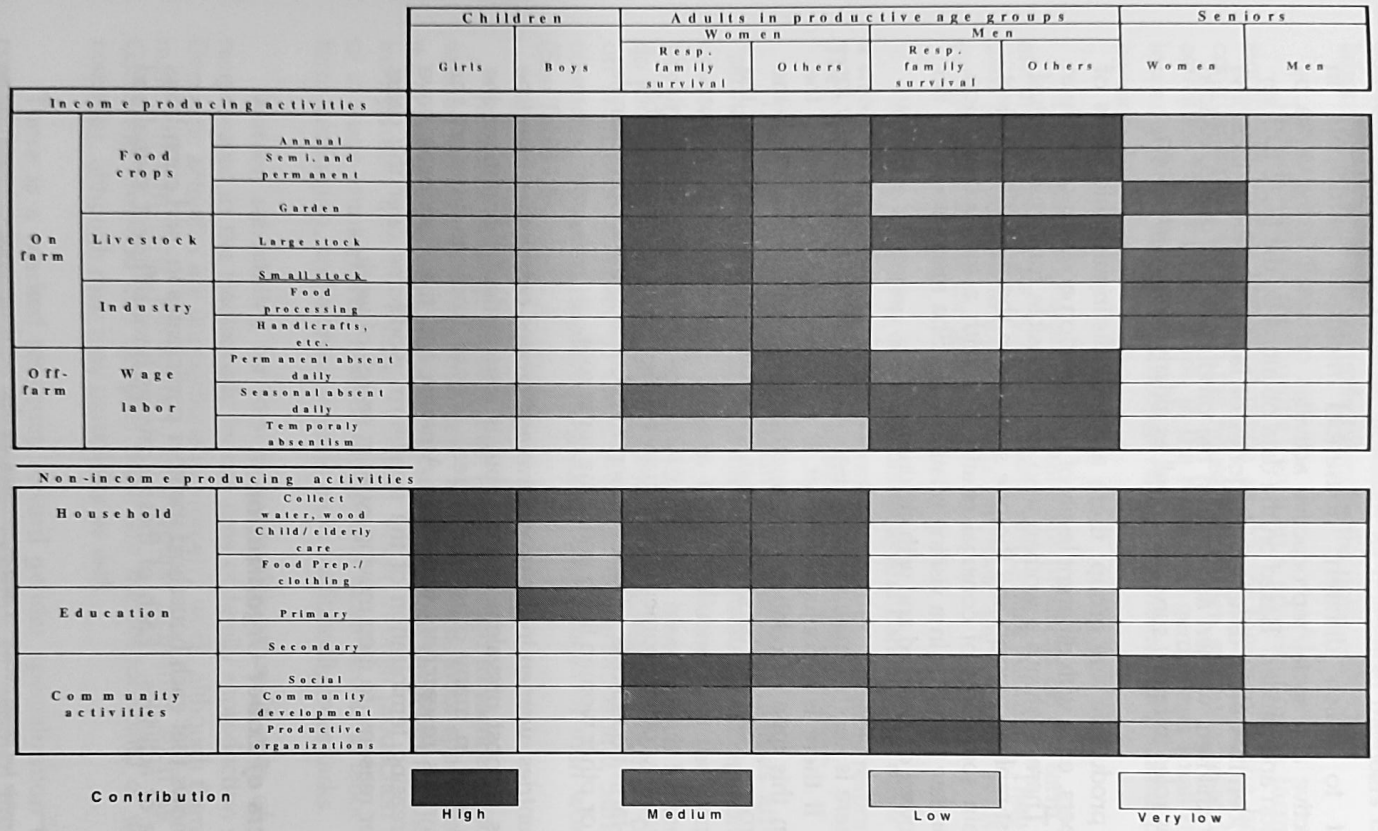


***Figure I.2. Labor organization in the small-farm agricultural household.***

**Source:** Kleysen, Brenda. Paper presented at the IICA/IDB Workshop on Women Food Producers in Latin America and the Caribbean, Washington, D.C., June 8, 1995 (based on IICA/IDB Surveys and Documents on Women Food Producers),

**Note:** Contribution for children in on-farm industrial activities, "for other men and women" in community activities, and for seniors is not well-established.

### *Participants*

The extent to which different household members participate in economic/productive and social/reproductive activities on small farms varies by age, family position and gender. Based on the data obtained by the IICA/IDB surveys, Figure I.2 identifies eight different categories of family members, including male and female children, women and men in the productive age group, divided according to their roles in family survival, as well as elderly women and men.

Within the productive age group, there are four distinguishable kinds of household members, each with different levels of participation and responsibility in the household. There is always a woman who is responsible for family survival. She is the highest-ranking woman and the one surveyed in the IICA/IDB project. She may maintain some sort of conjugal relationship with a male companion, either in common-law status or in a visiting relationship. She may also be on her own: single, widowed or divorced and with children.

Typically, there is another male in the household who shares responsibility for family survival. If there is a conjugal partner, it is usually this person. If the woman is not in this type of relationship, another male will usually share the "responsibility" role. This may be an older son, or another male member of the household.[3]

There are usually other women in addition to the "primarily responsible" woman in small-farm households. These women may be daughters, other female family members or other women living under the same roof.

In many countries, women in the productive age groups outnumber men (see Table I.5). This is most prevalent in Peru, but is also evident throughout the Andean region and in many other countries. These findings support the contention of various researchers that Latin America and the Caribbean have experienced increasing feminization of the small-farm workforce over the years due, among other reasons, to men moving away in search of work.

### *Gender Aspects of Labor Organization*

Figure I.2 shows that each household member participates in, and contributes to, a wide range of activities. Each of these activities have different spatial and

3 The term "responsible for family survival" is used to distinguish the male and female household member with the greatest burden and responsibility for the economic and social welfare of the family. In most cases, these men or women would be classified as a "household head." However, because socioeconomic responsibility is shared and usually not exclusive to one person, be this male or female, the term "household head" has been eschewed. There appears to be little association between the person named as household head by the women surveyed and economic responsibility.

temporal dimensions and the degree to which all households perform all of these activities varies. On average, however, all household members contribute some labor if these activities are undertaken by the unit.

The "primarily responsible" woman's contribution to farm production is significant and in the same range as that of the men in the household. Her contribution is also high in the household garden and in large and small livestock activities. Men's participation in the household garden and small stock activities is lower than women's, although their involvement in land preparation is considerable.[4]

If processed foods and handicrafts are produced on the farm, these activities are mostly carried out by the "primarily responsible" woman. They may be shared with other female family members but male participation is usually very low compared to that of the women.

With the exception of food processing and handicrafts, "other women" make a smaller contribution to farm production than the "primarily responsible" woman. Their role is more like that of a family helper in these activities.

The high level of contribution in productive activities attributed to the "primarily responsible" woman is based on observed participation and the time devoted by these women. This in turn is influenced by the frequency of men working off-farm in many small holdings; men have a much higher propensity to do so than "primarily responsible" women. The highest incidence of men working off-farm was observed in the Caribbean, in Barbados and Suriname. Other countries, however, displayed significant percentages of men working off-farm. (See Table I.6).

Research findings indicate that there is a high incidence of substituability of women for men in farm production. In other words, labor specialization by gender is low, or at least highly flexible. To the extent that small-farm households become incorporated into the market economy, either through production for the market or in wage employment, households become more flexible in labor assignments in farm production, and women assume more traditionally male tasks.

Women substituting for men in the traditional male area of farming is not reciprocated in the traditionally female area of family reproduction (see Table I.7). Domestic activities are unquestionably women's work, although there may be some male participation, particularly in irregular activities such as house repair. Gathering firewood and carrying water are the responsibility of women in most countries, although men may participate as well.

There is a marked tendency toward gender specialization in the area of community organizations. "Primarily responsible" women are the principal

4 Details of the gender division of labor in agricultural activities are found in Section 5.

representatives on social and welfare organizations while men are the principal representatives on productive and farm organizations. In the Andean region, for example, 49% of all women represent the family in health organizations, compared with 31% of men and 21% for other family members. On average, representation in productive organizations was as follows: men, 49%; women, 32%; and other family members, 19%.

The greater participation of men in productive organizations coincides with their usual role as household spokesmen. Institutional regulations, however, are also important. Rules that permit only one family member to participate in certain productive organizations such as cooperatives, for example, effectively rule out the participation of women.

As has been established in the literature and confirmed by the IICA/IDB studies, women pool their labor in domestic work. This includes both women in the productive age groups and "senior" women. Where there are no women to share the reproductive responsibilities of the "primarily responsible" woman, there is greater reliance on children. In particular, girls are often obliged to leave school to help at home so that the "primarily responsible" woman can fulfill production requirements.

The relationship between women on the farm indicates that production requirements dominate the allocation of female labor. In other words, women do not devote time left over from their reproductive activities to production; rather, it is an integral part of their working day. By pooling the labor of women and children in the reproductive area, "primarily responsible" women are able to free more time for farm work. As noted, their working day is very long (14-19 hours)and approximately half of this time is devoted to production.

Variations from the average shown in Figure I.2 regarding the role of the "primarily responsible" women were observed. For example:

- On those farms where there are no "other women" and the male companion works on-farm, the "primarily responsible woman" may tend toward the less intensive profile of "other women" in on-farm production (but not off-farm labor). This is particularly true if she has a large number of young children and the house is not located on the holding.

- If there is no permanent male companion, however, the "primarily responsible" woman will intensify her efforts, and is more likely to be active in off-farm wage labor. Young girls, whether in the productive age group or not, will assume more domestic responsibilities so that the "primarily responsible" woman may devote more time to productive work.

In short, the studies of the IICA/IDB project confirm the pluriform nature of life and work on small farms. There is a gender division of labor but it is flexible enough to accommodate the economic activities of the different members of the household.

On the other hand, the assignment of reproductive work is rigid, as men neither substitute for, nor assist women.

The literature has long recognized diversification in land use as a strategy that reduces survival risks. This is complemented by two other equally important strategies: a) diversification of family members activities; and b) substitution among family members, whether of the same sex or different sexes, in these activities. Women are more important than men in this regard, as it is women who replace men in the farm's productive activities.

Women play a fundamental role in the diversification of household activities and in replacing other members of the unit in performing activities. These are the two most important strategies for maximizing the well-being of the household and allowing it to adapt to changing socioeconomic conditions.

# 5. WOMEN'S CONTRIBUTION TO FAMILY INCOME

Small farm households draw upon numerous sources of income, monetary and otherwise. Typical monetized sources of income in Latin America and the Caribbean include: sale of crops and livestock, including byproducts which may be processed on the farm; sale of other products made on the farm, such as food and handicrafts; and off-farm wage labor. Non-monetary income sources include all farm production for own-consumption. International or national remittances are other important sources of income for many small-farm households. These are usually in money, but in-kind remittances are not uncommon.

Based principally on their labor contribution in monetized and non-monetized on-farm labor as well as of farm earnings, women's relative contribution to household income in various countries was estimated. Women are estimated to contribute between 37% and 66% of total household income in the Andean countries, 41% in Paraguay, 34% in Uruguay, and 27% in southern Brazil. Men and other family members make up the balance. (See Figure I.3 and Table I.8).

Women's contribution to income was similar in all countries, despite the different methodologies used to calculate it.[5] Women's contribution in Peru was higher than in other countries, a situation that could be the result of family composition (Table I.5). In the units surveyed in that country, there were nearly three women of productive age for every man.

As noted in the previous section, virtually all family members contribute to the economic well-being of the household through their labor in productive activities. Some are remunerated, others are not, or only partially so as in the case of farm production which is partially marketed. Many members also participate in more than one income source.

Women's income contribution tends to be associated more strongly with on-farm activities than men's and, in most cases, is more strongly linked with farming activities than that of men. This is mainly due to men's higher propensity to off-farm wage labor and to a relatively low level of artisan work among the women surveyed. With the exception of Paraguay and Peru, this tendency is evident in all countries for which estimates in the differences in real effort could be calculated (see Table I.9).

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5 Data from the Andean region is based on the IICA/IDB survey results. An opportunity cost of labor approach was used to estimate income, based on the number of hours devoted to both monetized and non-monetized productive and wage-earning activities. Returns to capital are not included in the estimations. In the case of small-farm households, this is usually associated with land -a family asset- and therefore does not distort the relative contribution to income by gender. Also excluded are international or national remittances; although they are another important source of income for many small-farm households, the surveys carried out were unable to quantify them.

The Paraguayan estimation is based on data disaggregated from a recent national income survey. The Uruguayan estimation is based on survey data from the IICA/IDB project, but a different income estimation methodology based on women's participation in different activities adjusted to monetary contributions was used.

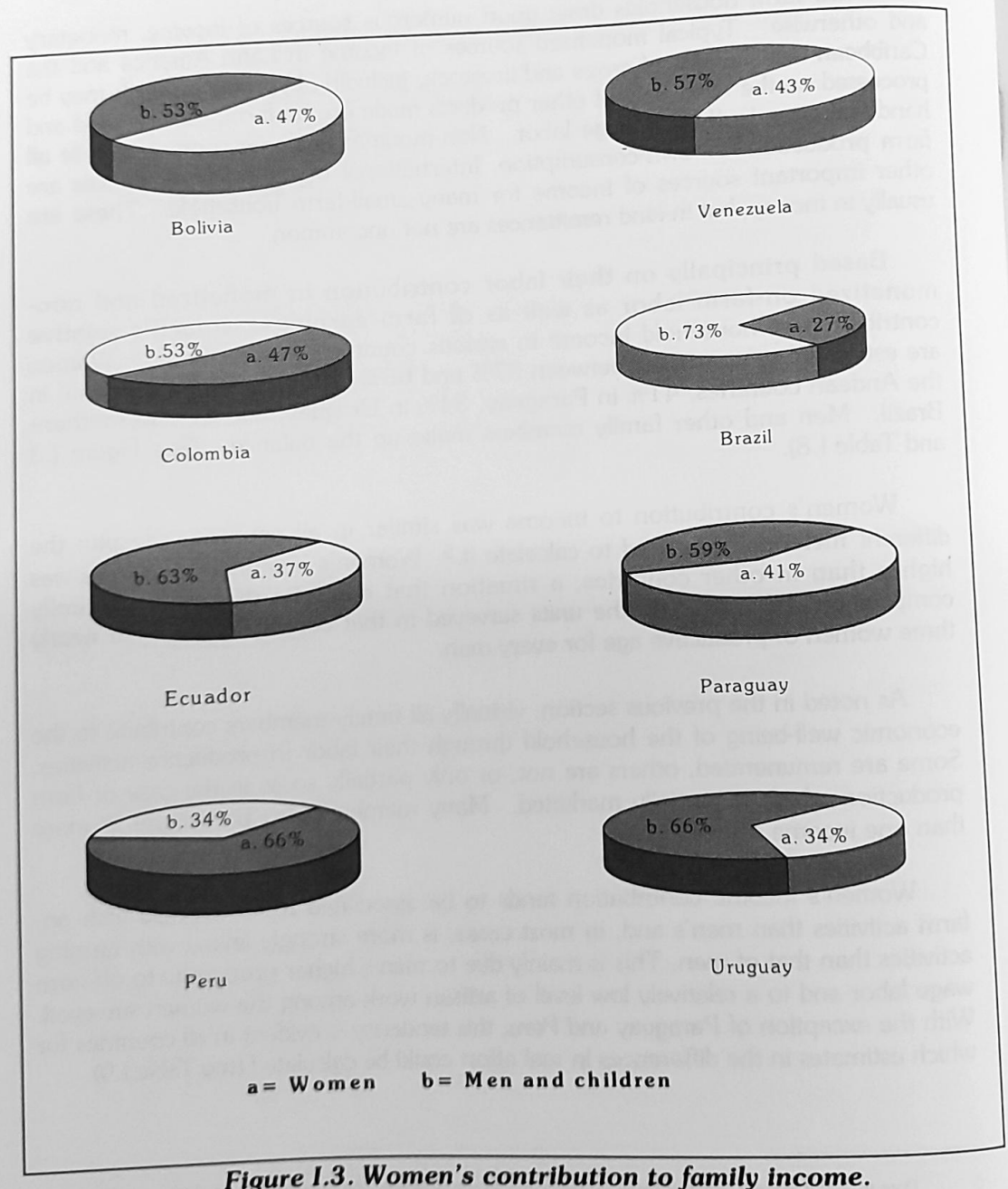


***Figure I.3. Women's contribution to family income.***

**Source:** Table I.8.

Given the difference between men's and women's wage rates, it is natural that women, particularly "primarily responsible" women, would display a relatively higher tendency to farm labor as their primary contribution to family income, as seen in Table I.5. Unlike the labor market, the market for goods does not discriminate between the price of a farm product produced by a man or a woman, so family income is maximized by women working on-farm and men taking paid jobs off-farm. Domestic and child-care responsibilities are another factor in this arrangement, since it is easier for women to combine productive income-contributing activities with those of the social reproduction of the family.

Women in the productive age groups other than the "primarily responsible" women have a higher tendency to work off-farm than "primarily responsible" women. This may be because their income contribution through farm activities is considered supplementary to that of the "primarily responsible" adults, and because earnings from farm production may be so low as to require other monetary income to meet consumption and investment needs. This is part of a survival strategy and not just a work option.

The existence of diversified income sources has significant economic advantages. Not only does it reduce the risk associated with farming and increase family survival potential, but it also pools family resources into an effective combination for earning income.

# 6. THE GENDER DIVISION OF LABOR IN FARMING

Results from the IICA/IDB study on women food producers indicate that women make a substantial and permanent contribution to small-farm production. In general, men and women tend to share the farm's productive activities. Women also make a major contribution to all crop and livestock activities.

However, there tends to be relatively more gender specialization in some activities and a more marked gender division of labor in certain phases of the production cycle.

## *Crop Production*

Details of women's participation in crop production compared to men are presented in Figure I.4 and Table I.10.

They show that more men play a greater role in land preparation although women also participate in this activity on 38% of farms. Women's participation increases during the planting season when it almost equals men's.

On average, women take part in planting on 60% of the farms, while men do so on 65%. Men tend and manage crops on 69% of the farms. Women play a smaller role in these activities but they still participate on a significant 46% of farms.

In harvesting, post-harvest and marketing, women's participation is greater than men's, particularly in post-harvest activities. This suggests that these are areas in which women specialize. In harvesting and marketing, men and women contribute more or less equally.

Up until harvest time, gender participation in farm work appears to be designed to fit the requirements of the work undertaken during the different stages of the production cycle. During planting and harvesting, when the workload is heaviest, women and men share the burden almost equally.

Women's high rates of participation in post-harvest activities, illustrated in Figure I.4, are directly associated with handling and primary transformation, including transportation from the field, storage, drying, packing, selection and other tasks, and not with food processing.

If food processing is included, the difference between the participation of men and women in post-harvest activities becomes more marked. Men were involved in food processing on less than 10% of farms in every country studied.

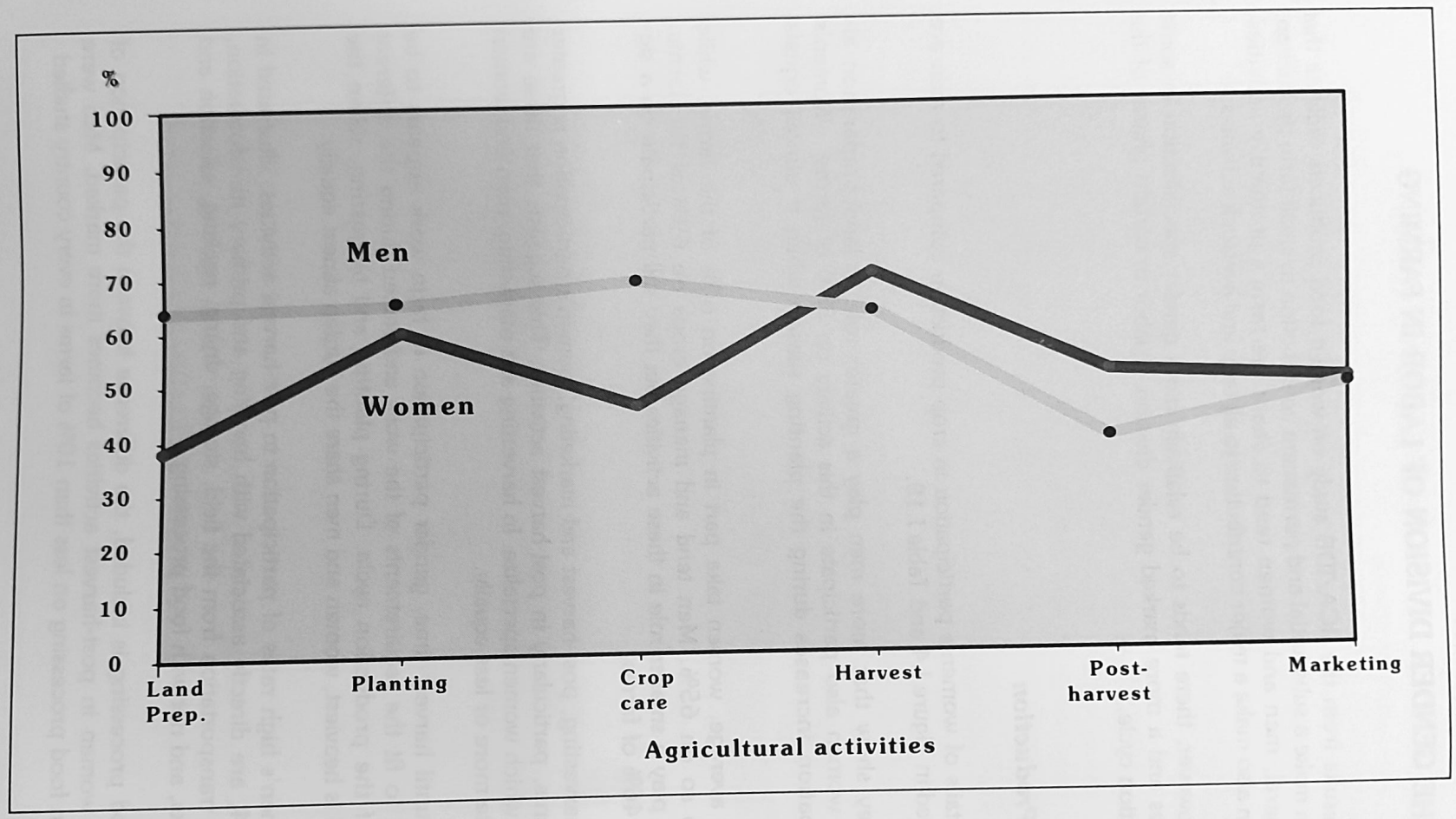


***Figure I.4. Gender participation in agricultural activities (Latin America and the Caribbean averages)***

**Source:** Table I.10.

However, with the exception of dairy products, the amount of food processing undertaken on the farms surveyed is too small for it to be classified as a productive activity. The highest incidence of processed food production observed was in Paraguay where it occurred on 69% of farms. However, on only 4% of farms were these products for other than own-consumption.

The number of farms where women participate in marketing varies widely among countries. In Uruguay and Paraguay, for example, women are involved in marketing on 30% to 40% of the farms, compared to the Andean countries where women handle marketing on over 60% of the farms. In both the Andean region and the Caribbean, women generally participate in marketing more than men. However, men are also involved in marketing on approximately 55% of the farms in the Andean Region and 33% of the farms in the Caribbean. (Table I.3).

Women's participation is more associated with direct sales to consumers than in men's. Where easier, less time-consuming outlets exist through institutions, cooperatives, etc., men tend to play a greater role. In Costa Rica, for example, the National Production Council (CNP) provides a well-developed institutional market outlet for small-farm production. In that country, women are involved in marketing on only 10% of the farms. In Colombia, women's participation in potato marketing is much lower than for other crops studied. There are more formal institutional outlets for potatoes and men have a much higher involvement.

The data suggest that where organized, more direct and less time-consuming outlets exist, these appear to be the preferred marketing channels. This is less the case in the Caribbean, where women have historically played a leading role as marketing intermediaries. Men also tend to be more involved in long-distance marketing. However, it would seem from the IICA/IDB surveys that many small farmers do their marketing at farm-gate. Transportation is a problem for almost all households studied. In Paraguay and the countries of the Andean region, for example, approximately 50% of corn production is sold on the farm or plot with 45% going to local or regional markets.

In the Caribbean, where marketing has long been regarded as a primarily women's activity, labor specialization among rural women also accounts for the relatively low percentages of women involved in marketing presented in Table I.10. While some women farmers actually market their produce to consumers, a large percentage of them sell to intermediaries, who in many cases are women. In Guyana and Jamaica, 53% and 76% of the productive units, respectively, sell their products to male or female intermediaries.

In short, the data from the IICA/IDB surveys indicate that women play a major role in farming and food production. Contrary to the widespread belief in the sector, their participation is neither marginal nor confined to certain specific tasks outside mainstream farm production. Women's participation is not limited to specific crops or oriented exclusively towards own-consumption. In fact, quite the opposite was observed. In Uruguay, for example, where researchers used farm

models to stratify the survey, they noted that women's participation actually came closer to that of men in the principal productive activities.

### *Livestock Activities*

The shared-activities pattern evident in crop production is repeated with livestock, although here a more predominant pattern of specialization was observed, both by activity and by type of livestock. (See Figure I.5 and Table I.11)

Small stock is primarily a women's activity. Their participation is higher than men's in every task. It is highest in feeding and grazing activities, with women undertaking this task on more than 60% of the farms in LAC. The percentage of farms in which women are involved in product extraction, such as egg collection and others, is lower than in feeding and grazing (34%). Children often help with these activities, which accounts for the relatively lo involvement of women. The figures for men in these activities are 29% and 8%, respectively.

For large stock (dairy and beef cattle), women's participation is higher than men's in activities such as feeding and taking the animals to pasture. Women are involved in this activity on 45% of farms, compared to 39% for men. Product extraction, such as milking, is also women's work on 41% of the LAC farms surveyed, while men do so on 31%.

Feeding/grazing and product extraction (milking and others) require a daily dedication of time and is the main reason why women are less involved than men in the daily tasks of crop tending. Once planting is over, and until harvest time arrives, women return to the tasks of tending animals rather than crops, although they continue to participate in the latter to some extent.

Men tend to participate more in less frequent livestock tasks like animal health and breeding. This may be due to the fact that these activities require more technical knowledge and that women are often excluded from training and technology transfer programs. This logically would lead to a more predominant male participation.

Women's participation in large stock activities is particularly significant, given the widely held belief small stock is women's work and large stock is men's work. While women's participation does vary among the countries, on farms where large stock is an important production category, their participation is actually higher in large stock than in other types of production.

In short, although women participate in almost all small stock activities, this is not their only contribution; their involvement in large stock raising is as significant as that of men in nearly all the countries studied. Only the tasks they perform are different.

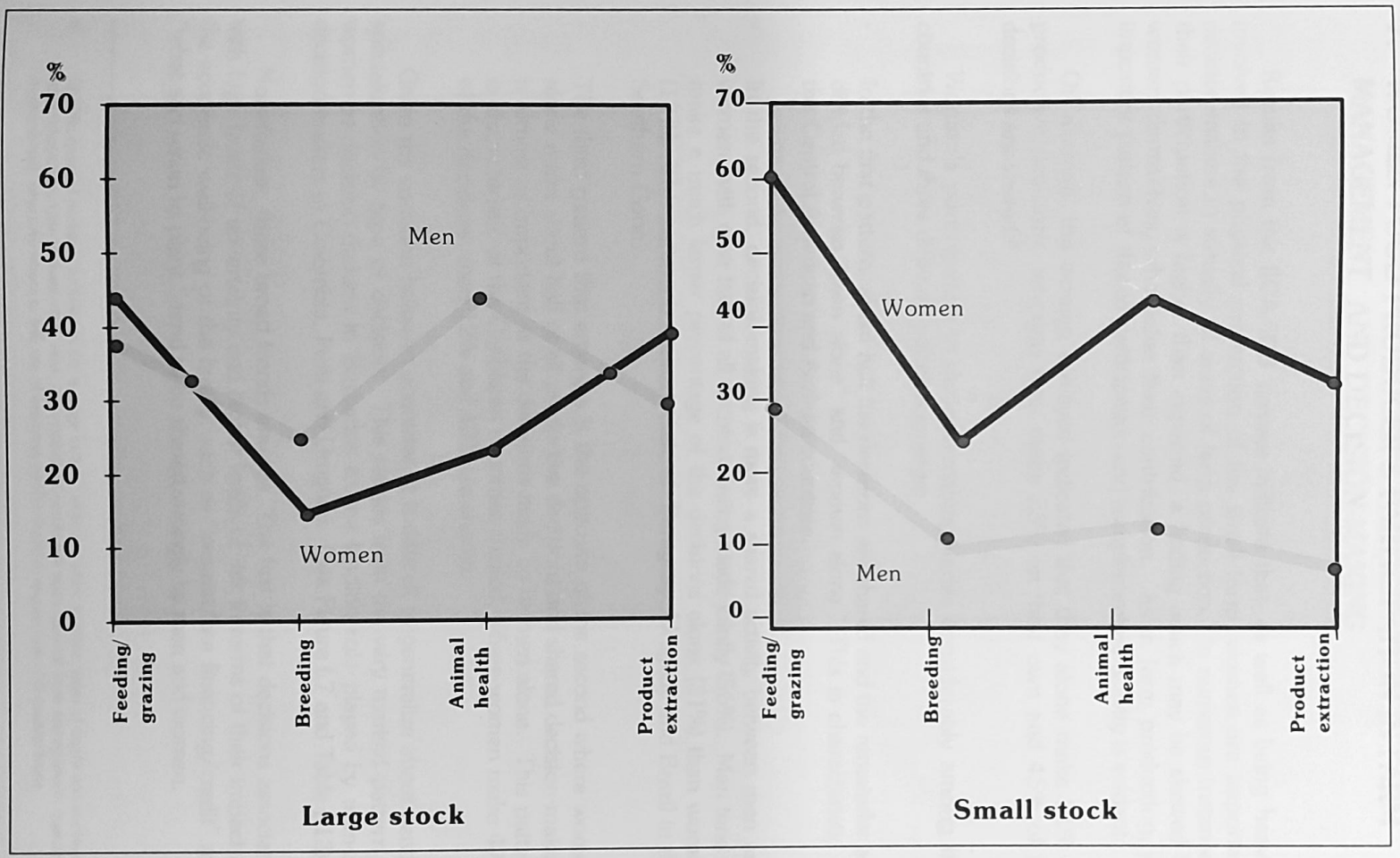


***Figure I.5. Gender participation in livestock activities (Latin America and Caribbean averages).***

**Source:** Table I.11.

# 7. WOMEN FOOD PRODUCER'S PARTICIPATION IN FARM MANAGEMENT AND DECISION-MAKING

Results from the IICA/IDB surveys indicate that, as well as being heavily involved in the physical production of the small farm, women are important decision-makers in virtually all areas of farm production. In numerous instances, their participation is higher than expected, a finding which may be skewed by women themselves, who value their contribution. As in farm production, an important pattern of shared participation and complementary activity is evident.

On average, the women surveyed indicated that they alone make 31% of productive decisions, whereas men make 25% on their own and 45% of all decisions are shared.[6]

Women's participation in decision-making varies considerably among the countries and three different patterns emerge:

- In the first pattern, about half the decisions are shared and the remainder are divided between "men alone" and "women alone." This is characteristic of the Central American and Andean countries.

- In the second, decision-making is more a shared activity between men and women, with over half of all decisions being made jointly (56%). Men tend to make a much larger percentage of the decisions alone (31%) than women (13%). This pattern is characteristic of Paraguay, Uruguay and Brazil in the Southern Cone.

- The third pattern that emerges is the opposite of the second where women alone make about half of all productive decisions and shared decision-making is almost as important as the decisions made by women alone. This pattern is characteristic of the Caribbean countries studied, where women make 47% of the decisions, men 12% and 42% are shared.

Given the variation between countries, it is difficult to generalize about gender specialization by type of decision. This ranges from the very marked pattern of women-as-decision-makers in Barbados to the leading role played by men-as-decision-makers in Colombia, Peru and Uruguay. (See Figure I.7 and Table I.13).

Nonetheless, three broad trends emerge. The first is that decisions associated with high levels of uncertainty and higher levels of risk in terms of their impact on the economic well-being of the family, such as "request/use financing/credit" and "what and when to plant," tend to be shared strongly by men and women.

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6 Specific types of decisions included in this average include: what and when to plant; types of inputs and implements to purchase/use; type of livestock to rear; organization of productive tasks/general farm management; quantity to consume/sell; where/to whom to sell; use of monetary profits/income; request/use of financing/loans.

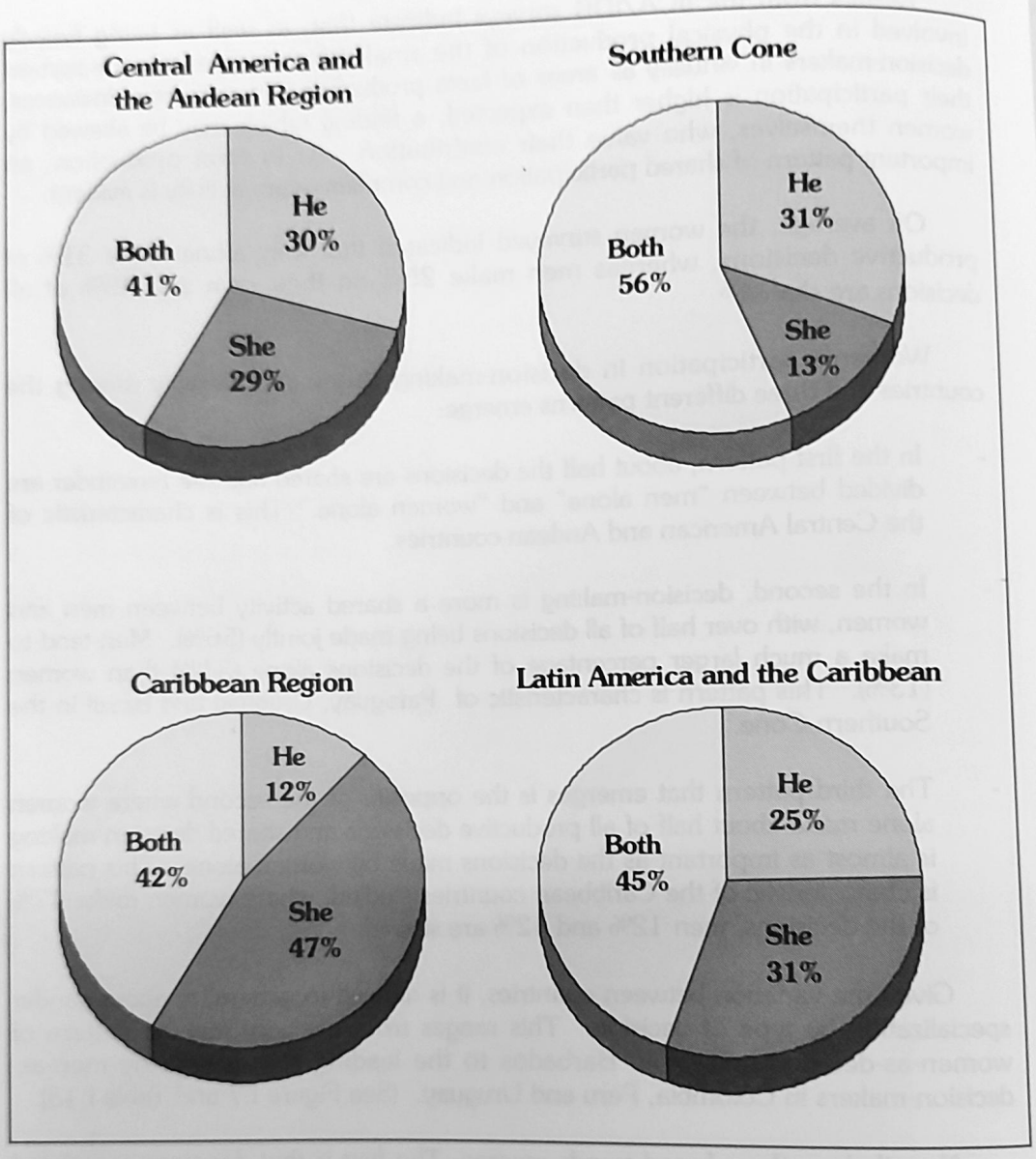



***Figure I.6. Relative gender participation in production decision-making.***

**Source**: Table I.12.

Decisions directly affecting farm monetary income and/or family well-being, such as the "quantity of production to sell or consume" and the "use of farm profits and monetary income" also tend to be shared tending toward a women's decision. In most countries, however, these are shared decisions in the highest percentage of households.. "Shared" or "her" decisions account for the highest and second-highest percentages of households in virtually all countries. Brazil, Colombia, and Uruguay are notable exceptions to this rule; in these countries, the second-highest percentage is "men alone" rather than "women alone."

More routine decisions tend to be more specialized by gender and are divided between men and women according to their relative participation in, or responsibility for, the associated activity. For example:

- "Who decides on the type of livestock to rear" tends to be more a women's decision and is linked to their high level of participation in small stock.

- "Where to sell" is a shared decision and reflects the relatively equal gender participation in this activity in the region as a whole. Marketing decisions are mainly made by women.

- "Types of materials/implements purchase/use" tends to be a male decision in virtually all countries and may be associated with men's greater exposure to technical knowledge.

- "Organization of production tasks and general farm management" is a shared task in most small-farm households in LAC, although it falls to women in the highest percentage of households in Jamaica and Barbados, and within men's area of responsibility in the highest percentage of households in Colombia and Peru.

Data from Jamaica and Brazil (the only two countries reporting) also indicate that women also have a higher rate of participation than men in bookkeeping.

Women's participation in decision making in the productive areas is complemented by their virtually sole responsibility for decision-making in the domestic/family reproductive area. Few men in any of the countries make decisions in this area. The strong role that the women surveyed play in decision making is often invisible to the outside world because of the tendency for men to assume the role of family spokesman and representative. For example, in southern Brazil, although the decision to seek financing is shared in well over 50% of the households, women actually make the financing request in only about 30% of cases.

Relatively little is known about decision-making processes within family units although the survey does indicate that women see themselves as important in this process. Obviously, their role is more significant than has been generally recognized, with important implications for agricultural projects and technology adoption, as well as for farm-management training and education in general.

# 8. WOMEN FOOD PRODUCERS' ACCESS TO PRODUCTIVE RESOURCES

Studies of the small farm sector carried out in LAC countries in the last two decades suggest that the principal structural constraints limiting access to the main factors of production are: a) a shortage of quality land, product of the most highly concentrated agrarian structure in the world; b) difficulty in obtaining credit and an abrupt reduction in the supply of institutional resources, caused by macroeconomic adjustment measures and having the most serious consequences for small-scale producers who account for a tiny percentage of the recipients of formal credit; c) the supply of agricultural technology geared to commercial crop-production and the limited coverage of extension services; d) a lack of price information, marketing mechanisms and an organized system for processing and adding value to agricultural products; and e) the inability of small farmers' organizations to gain recognition for their members' needs and interests in the context of increasingly urbanized societies geared to industry and services.

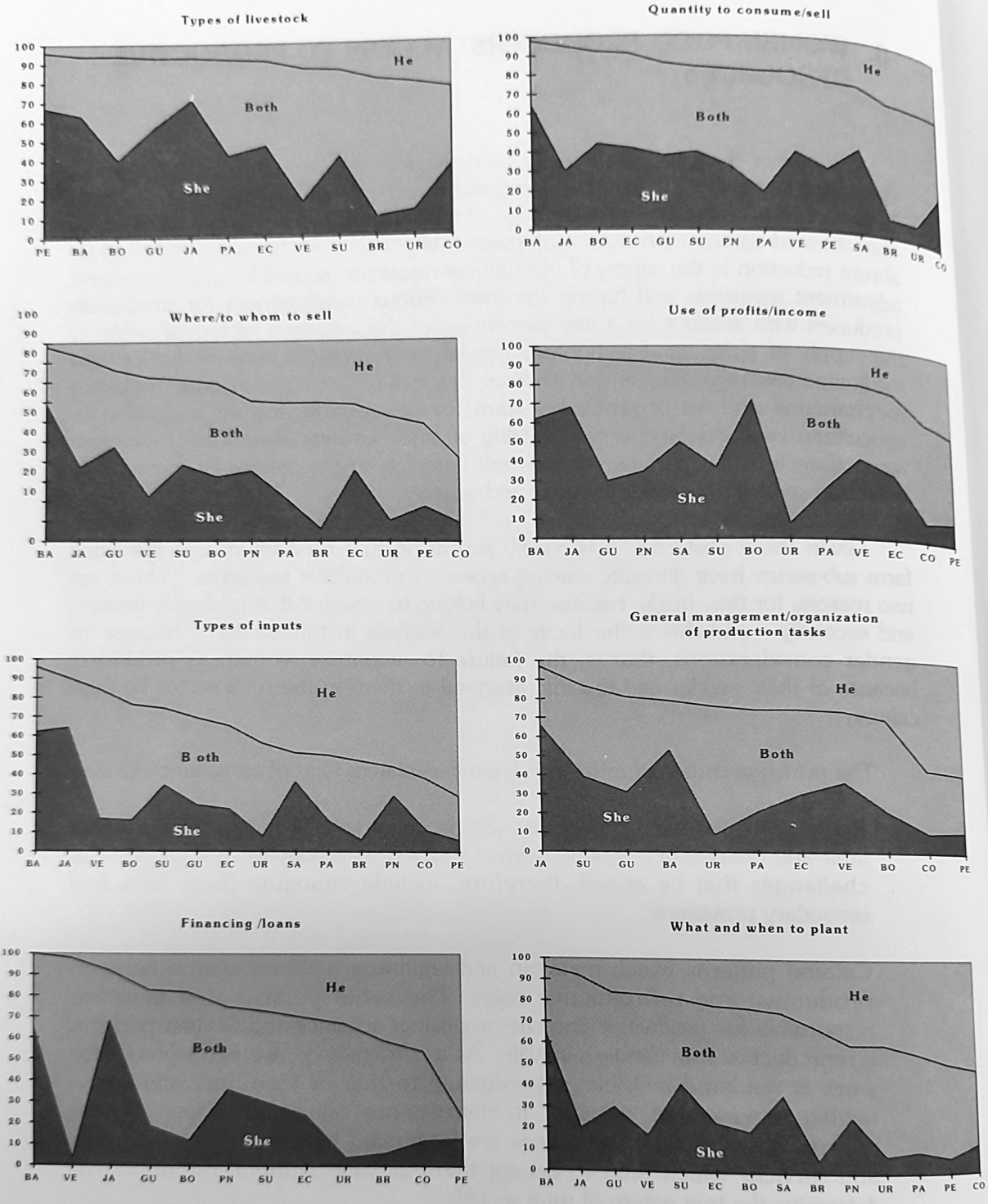
Given these obstacles, it is hardly surprising that rural women in the small farm sub-sector have difficulty gaining access to productive resources. There are two reasons for this: firstly, because they belong to a sector that is already limited; and secondly - and this is the focus of the analysis in this section - because of gender considerations, that is, the failure to recognize women as producers because of their gender and the role assigned to them in the rural sector by their culture.

The principal causes of this second, gender-related, type of constraint include:

- Regulations and legal provisions. Some countries still have provisions that limit and discriminate against women's access to productive resources. The challenges that lie ahead, therefore, include changing these laws and secondary provisions.

- Cultural patterns which maintain and legitimize a disassociation between productive and reproductive roles. The belief persists that men are responsible for productive (income-producing) activities and women perform a reproductive role (family survival). As a consequence, women's productive work is rendered invisible, subordinated to that of men and, ultimately, neither remunerated, recorded in statistics nor valued by society. These normative and cultural inequalities are legitimized by government programs and services which tend to accept them as valid without attempting to determine the true nature of rural societies.

- The limitations of institutions involved in the gender issue in the agricultural sector. Not only has the influence of agriculture ministries in government diminished, but the institutional base for gender equity is also very small and technically weak. Furthermore, the mechanisms and working arrangements




BA= Barbados BO= Bolivia BR= Brazil CO= Colombia EC= Ecuador
GU= Guyana JA= Jamaica PA= Paraguay PE = Peru PN= Panama
SA= El Salvador SU= Suriname UR= Uruguay VE= Venezuela

***Figure I.7. Relative gender participation in production decisions (percentages).***

**Source:** Table I.13.

of these institutions tend to reproduce a rigid division of labor and roles determined by the culture. Minimal attention is paid to the role of women as producers, few resources are allocated to them, they do not figure prominently in the decision-making processes of the appropriate institutions and they are usually not funded with the ordinary resources of the countries.

An analysis of the main factors of production confirms these assertions about gender-imposed constraints.

## *Land*

Over the last decade a number of countries (Brazil, Colombia, Honduras, Peru and others) have made great strides in legislating women's rights to obtain title to land distributed by the state. Nonetheless, these measures have not been sufficient to reverse the historical exclusion of rural women from the chief productive resource of small farms. It has already been shown that almost all the women surveyed were farmers and that they contribute one third of family income (national averages vary from around 30% to 40%). In contrast, Figure I.8 and Table I.14 show that men control land ownership. The proportion of women who have land registered in their names varies considerably, ranging from 9% of women in Nicaragua[7] and very low percentages in the other Central American countries (except Panama), southern Brazil, Paraguay and Suriname, to relatively high figures (43% to 49%) for Panama, Venezuela, Guyana, Barbados and Jamaica.

The Caribbean countries studied are a special case. There women have access to family-owned land and are guaranteed the right to use it under common law. Some 52% of the women surveyed in the Caribbean said that their land was family land and therefore could not be individually owned.

These figures show that gender discrimination continues. However, as they are limited to one point in time, they provide no information on how this might be changing. National studies conducted in countries such as Costa Rica and Colombia have shown that specific provisions introduced to guarantee women greater access to land title have resulted in a short-term increase in the number of women owning land.

Two problems caused by gender inequality persist. Firstly, agrarian reform and land distribution processes have been drastically cut back; as a result, land titling activities can make only a marginal contribution to reestablishing women's rights to land distributed in the past. Secondly, in countries where changes in the structure of land ownership were introduced, such as Bolivia and Peru, the percentage of women who said that they had land titles were 20% and 33%, respectively, lower

7 Figures for 1992.

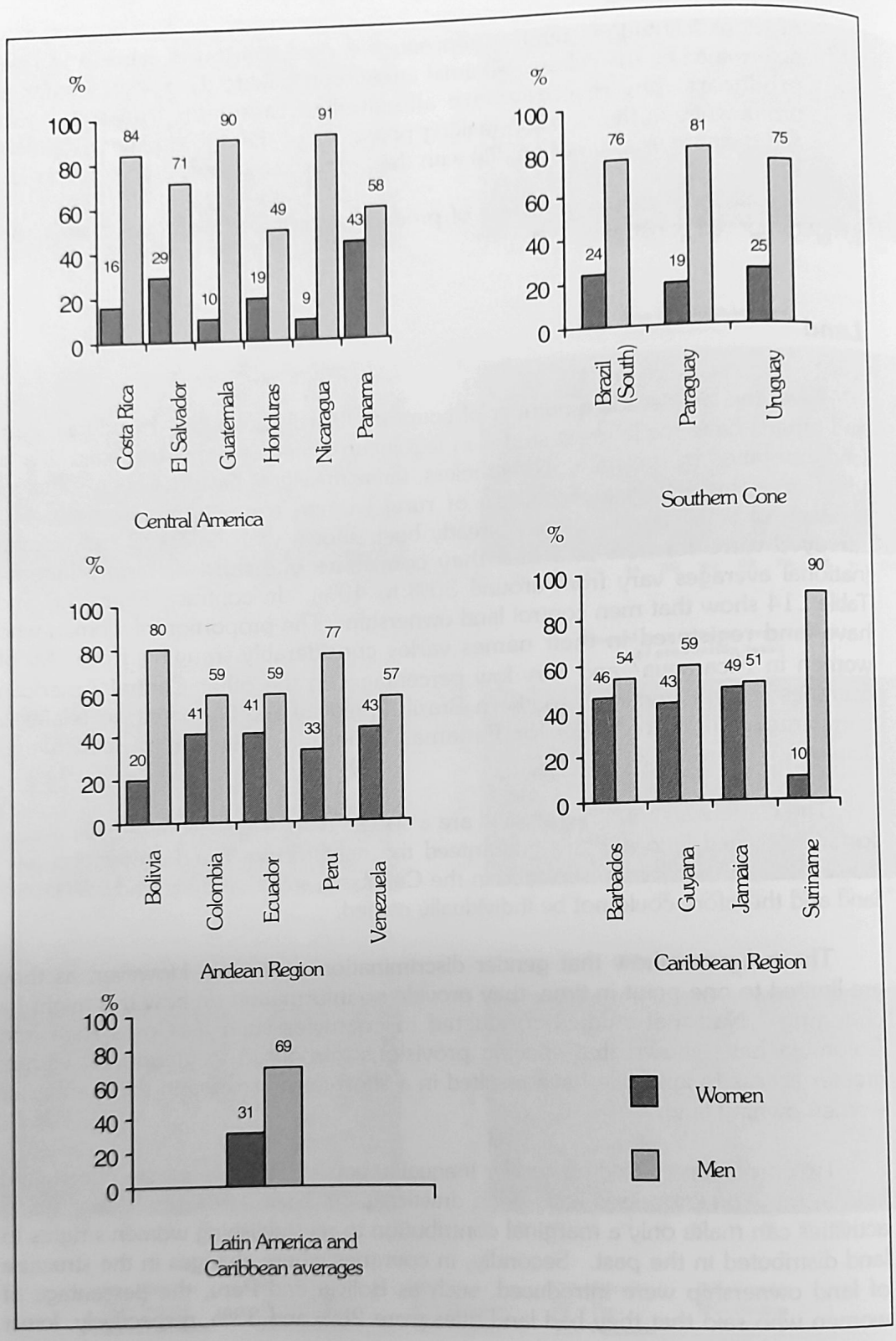



***Figure I.8. Relative gender participation in land titles.***

**Source:** Table I.14.

than the figures for neighboring countries. In short, when the opportunity to obtain land arose, it was seized by male farmers.

Although provisions and procedures have been improved in recent years to give women an opportunity, their access has been limited by the inequitable distributions of the past and by the lack of land for distribution.

Colombia and Brazil recently implemented policies designed to re-activate the land market and give small farmers access to land. These have not yet been studied from a gender perspective and warrant special attention.

### *Credit*

The main factors limiting women's access to agricultural credit are the inability to provide guarantees, the requirement that the spouse give permission, illiteracy, ignorance of the available sources of credit and women's lack of awareness of their status as farmers.

Research on this issue suggests that the situation varies from country to country, although the reasons for the striking differences in the percentages of women who have obtained credit (ranging from 3% in Uruguay to 43% in Honduras) are not clear[8]. However, some common elements are worth noting:

- With the exception of Venezuela, which for years had a flourishing credit market, women have better access to private sources of credit, NGOs, community banks and other mechanisms, than to state-owned banks. (See Figure I.9 and Table I.15).

- The percentage of women who did not use credit of any kind was very high, especially in the Caribbean region, the Southern Cone, Bolivia and Peru (Table I.15).

Credit from state-owned and private banks does not, therefore, appear to be a common factor driving the economic activities of women producers. On the contrary, the use of other, less formal financial systems like community banks, savings and loan associations and revolving funds is more widespread among the female population.

The restricted supply of credit is accompanied by limitations in demand. In only four of the 18 countries studied did women account for more than 35% of the individuals applying for credit (see Table I.15). The figures for Bolivia and Peru (only 6%) were particularly striking and may be a reflection of the low educational

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8 Different cultural factors, country-specific programs, the presence or absence of alternative mechanisms for accessing formal bank credit and the organizational level of the women account for some of these differences

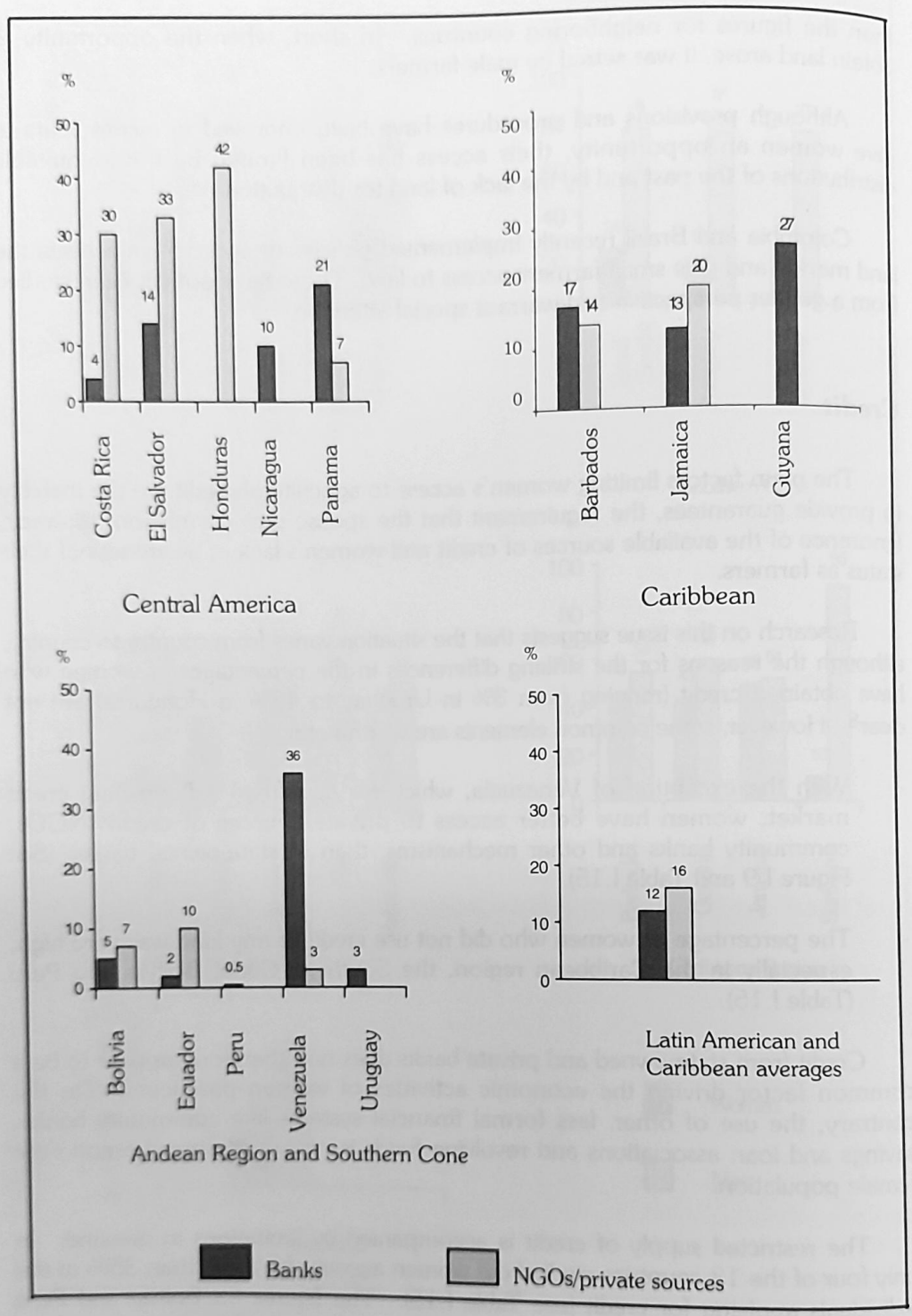


***Figure I.9. Credit received by women food producers by source (percentages of surveyed women).***

**Sources:** IICA/IDB Women Food Producers Surveys 1991 (Central America) and 1993 (rest of countries).

level and language difficulties faced by adult rural women, most of whom are indigenous and do not speak Spanish.

In the Andean countries, women did not regard themselves as qualified borrowers and feared the possible consequences of acquiring obligations (interest and payback periods, for example), the difficulty of processing applications and the high cost of credit. Unlike their male counterparts, however, over 90% of women applicants were granted credit.

Although the data confirm the existence of inequalities between men and women regarding access to credit, subregional analyses suggest that the solution to this problem lies in combining policies aimed at improving the conditions and opportunities for small farms with measures designed to provide preferential opportunities for women. This would solve the problem of the sector as a whole, and remove the inequalities between men and women in terms of both opportunities and benefits.

### *Technology*

Time and again, attention has been drawn to the fact that research and technology transfer are not neutral in social and gender terms. This is confirmed by the IICA/IDB study.

The gap between the participation of women in agricultural activities and the technology transferred to them does not appear to have narrowed. On the contrary, with the scaling down and privatization of government services, there is a tendency for technology to become the prerogative of medium-sized and large farms specializing in commercial crops. With few exceptions, women farmers do not figure as prominently among this privileged group as in the production of food for direct consumption.

Figure I.10 indicates that Barbados is the country with the largest proportion of women who have received training and technical assistance in almost every subject. Colombia is in second place, followed by Venezuela. In the other countries, the percentage of women who have received technical assistance services is less than 10%, and in most cases under 2%. In other words, only in very special cases (Barbados, due to the level of urbanization of the rural sector and the high standard of living, and Colombia, with its tradition of rural training and technical assistance and the early implementation of policies in favor of rural women), have technology transfer systems viewed women as part of the institutional clientele.

It is important to underscore the role played by women in adapting production instruments manufactured based on the size and weight of men's bodies. Women adjust the size of hoes and spades, find ways of carrying heavy loads and children simultaneously and seek other ways of adapting technology. They are also

prepared to diversify production and experiment with new varieties of legumes, vegetables and root crops.

An important degree of cooperation exists between men and women in agricultural labor, but there is a gender gap in access to advanced technologies (the use of tractors, sprayers and other equipment). The reasons for this are cultural, rather than institutional or a question of different skills. This pattern could, therefore, be modified through information campaigns and programs that give women farmers and their male counterparts opportunities to overcome existing discriminatory practices.

As a whole women do not apply agrochemicals in LAC. Women farmers in Jamaica and Barbados are an exception to the rule. This pattern is a result of the division of labor in these countries, where women take charge of the management and reproduction of households and productive processes. Figure I.11 shows that women do participate in the application of agrochemicals (in Barbados, Guyana and Jamaica, the figure is over 40%).

### *Marketing Information and Mechanisms*

Studies of small-scale agriculture reveal serious marketing problems including inadequate access to price information, lack of storage facilities, adequate roads and transportation equipment, sharp market swings and many more. The growing trend towards government non-intervention, especially in formulating and implementing pricing policies, has adversely affected men and women farmers alike. At issue in this section is whether there is a gender difference in this area.

Women are active as traders in almost all of the countries, with low levels of participation only in Uruguay and Costa Rica. The conditions under which women sell food products, and the fact that they specialize in certain segments and types of trading, give rise to some gender differences:

- Domestic and reproductive responsibilities make it difficult for women to travel and they tend to limit themselves to selling products at farm-gate or in local markets close to home. Only men can travel long distances, sometimes using animal transportation. In the study of the Andean region, it is argued that improvements in rural roads produce greater economic benefits for women as traders than their male counterparts by giving them wider access to local markets and intermediaries.

- Women are poorly organized, limiting their participation in marketing initiatives that would help to overcome their isolation as individual producers.

- Their low level of education is not necessarily a constraint to the active role of women in retailing. Even illiterate women are autonomous and perform efficiently in these markets. Radio is a source of price information used by

| | Seed selection/ production | Use/handling of chemicals | Postharvest handling techniques | Marketing | Feeding/ animal raising | Farm management/ accounting |
|---|---|---|---|---|---|---|
| LAC average | 3.8 | 6.6 | 3.2 | 4.2 | 3.2 | 4.6 |
| >15% | | | | Bolivia | | |
| 10-15% | | Barbados<br>Colombia<br>Venezuela | Colombia | Barbados | | Barbados |
| 5-10% | Barbados<br>Colombia<br>Venezuela | Bolivia<br>Peru | Barbados<br>Bolivia | | Barbados<br>Bolivia<br>Paraguay | Colombia<br>Peru |
| 2-5% | Bolivia<br>Ecuador<br>Jamaica<br>Peru | Ecuador<br>Jamaica | Peru<br>Venezuela | Colombia<br>Jamaica<br>Peru | Colombia<br>Venezuela | Venezuela |
| <2% | Guyana<br>Paraguay<br>Suriname | Guyana<br>Paraguay<br>Suriname | Ecuador<br>Guyana<br>Jamaica<br>Paraguay<br>Suriname | Ecuador<br>Guyana<br>Paraguay<br>Suriname<br>Venezuela | Ecuador<br>Guyana<br>Jamaica<br>Peru<br>Suriname | Ecuador<br>Guyana<br>Jamaica<br>Paraguay<br>Suriname |

***Figure I.10. Women on small farms who have received training or technical assistance (percentages).***

**Sources:** IICA/IDB Women Food Producers Surveys 1993.

men and women farmers alike. Wholesale marketing is another matter, as the mechanisms are more complex and the ability to read and write is essential.

The studies in the Caribbean countries identified the information sources most commonly used by women farmers. Most women said that they received information from relatives and friends (59% in Jamaica, 85% in Guyana and 76% in Suriname), followed by agricultural extensionists and the radio. (See Table I.16).

## *Technical Training*

Information on institutions that provide training is either non-existent or of limited use in the context of this study, as it is not disaggregated by gender. This section, therefore, draws on the comments of the women themselves about which family members had received, or aspire to technical training.

Table I.14 shows that, in comparison to men, women's access to training in Costa Rica, Guyana, Paraguay and Peru is fairly limited. At the other end of the scale, women have greater access in Bolivia, Jamaica, Panama and Venezuela. The reasons for these differences are not clear, but would appear to range from cultural patterns to the efforts made by some states to provide training for the rural population in the context of agrarian reform and rural development programs.

A common thread of the reports on national research is the tendency for institutions to offer women training on subjects like handicrafts and domestic tasks, while men undertake technical agricultural and business management training. In the Central American countries and the Caribbean, the women interviewed stated that they would like to receive training on technical subjects: farm management (25% in the Caribbean), the use of fertilizers and pesticides (26% in Central America and 30% in the Caribbean), seed selection (23% in the Caribbean), post-harvest management (16% in Central America and 17% in the Caribbean), planting activities (17% in Central America), marketing (18% in Central America and 20% in the Caribbean), and post-harvest activities (16% in Central America and 17% in the Caribbean).

In short, little has been done to close the gap between the work that women perform and the resources and productive services available to them, and between what they and their male companions and relatives can obtain. Unless special measures are adopted to narrow this gap, in ten years' time the level of discrimination will the same as it is today.

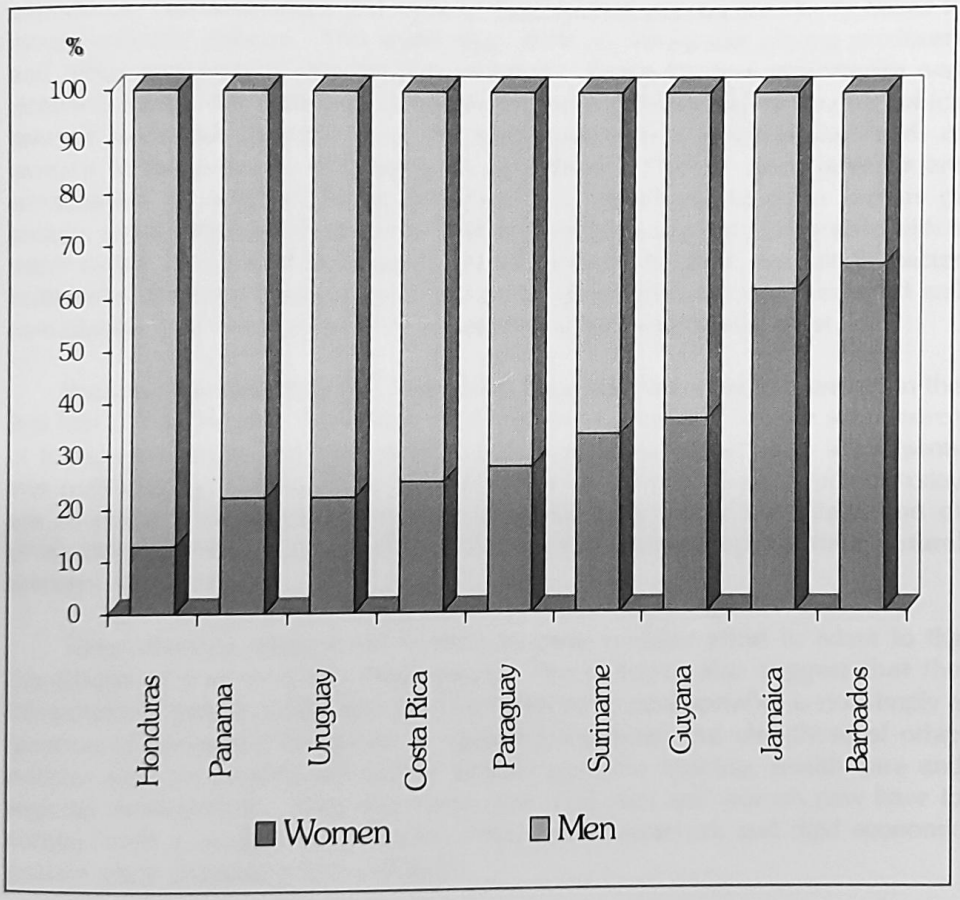


***Figure I.11. Gender participation in handling agrochemicals***

**Sources:** IICA/IDB Women Food Producers Surveys 1991 (Honduras, Panama and Costa Rica) and 1993 (rest of countries).

# 9. PUBLIC POLICIES AND WOMEN FOOD PRODUCERS

Perhaps the most striking aspect of agricultural and rural development policies on women's participation in LAC is the change that has occurred in the institutional context in which these policies are implemented.

Firstly, the relative influence of ministries of agriculture in government apparatuses has diminished, and most of their sectoral policies are closely linked to macroeconomic policies. This undermines their regulatory role among producers and other segments of the rural population. Secondly, less importance was attached during the 1980s to rural development policies and programs, which seemed to be the "natural" place for incorporating the demands and needs of women food producers in small-farm agriculture. Thirdly, since government services are increasingly being privatized and transferred to other sectors of society, small farmers of both sexes need to be better equipped to negotiate with a wider range of actors if their needs are to be met. In short, agricultural sector institutions and rural development policies and programs have been weakened and new players have become involved in agricultural and rural development.

Economic globalization and integration have also had a decisive impact in the first half of this decade. Agriculture continues to be a major, if not the sole, source of foreign exchange, and has therefore had to undergo the necessary adjustments and restructuring. Some of the key objectives of agricultural development today are to make it competitive, promote diversification, foster the integration of productive processes into agri-food chains and institute appropriate natural resource management.

These changes oblige small farmers to make a major effort to adapt to the conditions of free-market competition. The changes also suggest that the integration of gender equity into the development of rural societies is not simply a question of correcting the biases in agricultural policies, but also those of other policies such as poverty alleviation, human resource training, health care and regional development. They also mean that rural men and women now have to contend with a weaker, less cohesive institutional framework and rigid economic policies when presenting their demands.

These changes could have different implications for women. It is possible that more employment opportunities for women in the export sector (as in Chile) will mean increased rural female proletarianization and some women will have access to paid work. It also appears that some rural women will be obliged to work harder and diversify their labor due to continuing poverty and the competition faced by small farms in food production. Another possibility for small and medium-sized producers who manage to diversify and modernize their operations is that they will perform productive or marketing activities that, for example, meet the expanded demand of a population that has more money to spend. It will all depend on the social stratum and class of the women affected and on their organizational capacity to respond to the changes.

One of the best analyses and characterizations of agricultural policies as they relate to women in Latin America and the Caribbean is that by Magdalena Leon in the mid-1980's (Leon, M. and Deere, C. 1986: 17-24). Most of them apply to the segment of the population targeted by this study: women food producers on small farms. Some of the most important characteristics are:

- The exclusion of women from agrarian reform policies designed to complement industrialization in the Latin American region was a common denominator.

- The failure to take account of the productive role of rural women stems from the traditional agricultural extension model, under which women were perceived as being responsible for ensuring well-being in the socio-domestic domain.

- The integrated rural development model (IRD) also failed to ensure the equitable participation of women. At best, "components" for women were created in IRD projects that tended to focus on poorly paid activities with low productivity. To be fair, however, in certain cases they have been instrumental in helping women to get better organized and achieve more power.

- Neo-liberal policies are having a decidedly negative impact on small-farm production. Job opportunities for women have been affected by the changes in agro-export agriculture and women are required to make a bigger contribution in the face of growing poverty.

- The drive to diversify exports has boosted the demand for cheap seasonal labor, which in turn has increased the proletarianization of women.

The outlook has not changed significantly as far as women and gender equity are concerned. While there is now greater awareness of the issue and efforts have been made to institutionalize it, supposedly gender-neutral agricultural policies fail to take account of the different participants in rural areas and how each contributes to development.

## *Agriculture Sector Policies*

Although macroeconomic policy dictates agricultural sector policies, there is always some degree of autonomy. This is reflected in changes in legal and secondary provisions that have occurred in the sector in several LAC countries. This section deals principally with policies on the participation of women in agriculture and rural development.

## *Land*

This is perhaps the area in which most progress has been made. Agrarian legislation and constitutional provisions in several countries have been amended to incorporate women's demand that they be guaranteed access to land or the awarding of land title. The following countries have made changes that were positive for women:

- In Brazil, Article 189 of the 1988 Constitution provides that women or men, regardless of marital status, may be granted title to rural properties and awarded land under agrarian reform programs.

- Law No. 30 of 1988 in Colombia and Law No. 650 of 1993 in Peru include provisions that place women and men on an equal footing regarding the right to receive land from the state and bequeath it to their offspring. The Colombian legislation also grants women belonging to the National Association of Rural and Indigenous Women the right to sit on the central board of directors and the regional committees of the institute responsible for allocating land and granting land title.

- In Honduras, the 1992 Agrarian Modernization Act amended articles of agrarian legislation under which women were denied access to the property titles granted by the state. It also proposed that male and female family members be granted joint title.

- In Costa Rica, the Social Equality of Women Act guaranteed men and women equal rights and provided that in a common-law marriage, the state should award land title to the woman. This provision was challenged in the courts on the grounds that the legislation discriminated against men, and the court's decision (1993) obliged the Agrarian Development Institute (IDA), the government agency in charge of land and settlement programs, to award title to both spouses, regardless of whether they were legally married or not.

- In Barbados, the 1975 Succession Act and the 1981 Ownership Act guaranteed men and women equal rights before the law.

Agrarian reform has been superseded in agricultural policies by new models, such as the establishment of funds for buying land, land use management, the granting of land title and efforts to make land markets more transparent. These new initiatives do not address women's needs. Current land-titling efforts appear to be an attempt to bolster the meager achievements of agrarian reform, under which women received only a small percentage of the land distributed.

### *Technology generation and transfer*

Significant changes have taken place in this field over the last 10 years, especially in terms of the institutional organization of policies and the provision of services (e.g., the separation of research/technology generation from rural extension and the privatization and decentralization of technical assistance services). However, the new approaches fail to take account of the specific needs of men and women farmers.

It is fair to say that in this field no progress has been made in acknowledging the participation and needs of women. The analyses carried out in the four subregions confirm that women are not guaranteed access to available technology, despite the fact that the declared intention of technology development policies is to benefit all farmers and thus eliminate discrimination. Even in the Caribbean countries, where women have traditionally performed a role in agriculture, technology generation and transfer policies fail to take gender specifics into account.

Tentative efforts have been made by some rural development projects and institutions, such as the National Center for Agricultural and Forestry Technology (CENTA) of El Salvador and the Municipal Technical Units of the National Technology Transfer Program (PRONATA) of Colombia. In general, however, public policies, as well as the recommendations of the women's movement and gender and development experts, are bereft of ideas. What is needed in the region is further conceptual development and operating and planning proposals to articulate the issues of gender and agricultural technology.

### *Credit*

The most notable developments in this field in recent years have been the specialization of credit by type of producers and production, and a drastic reduction in the amount of credit available for small-scale agriculture. No progress has been made in defining policies or strategies to increase women farmers' limited access to formal credit.

It was noted in the previous section that, generally speaking, the credit obtained by women comes from private funds, involves small amounts, and is not connected to national credit and savings systems. This has advantages and disadvantages. The advantages include the flexibility with which private funds and alternative financial institutions (community banks, savings and loan associations, revolving funds, etc.) can respond to the specific needs of women and overcome the restrictions imposed on them by their subordinate status (lack of guarantees, exclusion from membership of productive organizations, ignorance of the requirements for applying for credit, and others). Disadvantages include the fact that women continue to have little experience in credit because no mechanisms have been put in place to enable them to make the transition

from flexible and subsidized credit to formal credit institutions. This is a structural handicap that prevents women from accessing credit under better conditions.

A study carried out in the Central American countries (Chiriboga et al. 1995:51) suggested that although private systems "(...) have managed to reach sectors that did not previously have access to credit, it is also true that, because they are so diffused and uncoordinated, they are very expensive, usually involving a long chain of intermediaries that makes credit more expensive; very few organizations become self-sustaining (...)." The inference is that the absence of policies to regulate and coordinate this activity adversely affects the development of the less formal systems used by women.

### *Marketing*

In the Caribbean, the analysis of policies on this subject indicates that, with the exception of Barbados, "modern approaches have not been used for the marketing of food products. In other words, marketing is carried out in the same way as it has been for the last 400 years, without the successful intervention of the State" (McFarlane 1996).

Similarly, the study of the Andean countries points to the fact that structural barriers impede easy access to the market by small-farm economies, and that the latest development has been the priority given to free-market mechanisms. These, together with the globalization of the economy, have resulted in massive imports of food by the countries in the region (Ochoa and Campillo 1996).

In the Southern Cone, M. Sisto (1996) has shown that the policies and programs implemented in Brazil to regulate food supplies fail to take account of small producers of either sex, and that in Paraguay the market mechanism is especially detrimental to small producers.

In no country were policies found that took account of the participation of women, even in those cases where programs designed to promote the marketing of small-farm production were identified (e.g., the Program for Agricultural Non-Traditional Exports in Uruguay).

### *Rural development*

This is the "natural" space for incorporating gender equity. However, in the 1980s less emphasis was placed on rural development policies and programs and government institutions gradually withdrew from the field. The elimination of integrated rural development programs, the drastic downsizing of institutions that provided services to rural communities and cutbacks in public investment in rural areas undermine rural development policies and national programs.

Efforts to incorporate the demands and needs of women into rural development programs have also been insubstantial and inadequate. It has been limited to small income-producing projects or components targeted specifically at women that are weak in both institutional and financial terms, despite the substantial resources managed by such programs.

In the early 1990s, international funding agencies began to look again at the issue of rural development, incorporating new concerns such as sustainability and management of the environment, eradication of poverty, democratization and gender equity. Countries such as Bolivia, Colombia and Costa Rica have implemented sustainable rural development programs. A holistic approach like the one now being implemented provides a more positive environment for incorporating the gender issue into the economic and social development of rural areas, and should be encouraged through the generation of the required expertise and mechanisms.

### *Attempts to Implement Policies Targeted at Rural Women*

Some countries (Bolivia, Colombia, Ecuador and Jamaica, for example) have shown an interest in defining policies and strategies or executing programs to help rural women.

The Rural Women and Development Commission (COMUCADE) set up in Bolivia in 1992 is made up of government institutions, NGOs and international cooperation agencies. It is responsible for proposing policies and actions designed to incorporate a gender approach into the programs, projects and actions of agricultural sector entities. COMUCADE formulated a proposal, but it was not put into effect as a formal policy.

In 1984, Colombia adopted the "Policy on the Role of Rural Women in Agricultural Development," which called for institutions in the sector to recognize women as productive agents and give them access to the services and resources provided by those institutions. Ten years later, the Policy for Rural Women looked at the issue again and introduced changes based on the lessons learned from the earlier experience. The Ministry of Agriculture is now coordinating the programs and activities of the agricultural sector within the framework of the National Policy on Participation and Equity for Women (1994).

From 1980 to 1984, Ecuador implemented a National Development Plan that included a program for rural women, within the framework of the Marginal Rural Development Fund.

In Jamaica, the National Policy Statement on Women (1987) and the 1990-1995 Five-year Development Plan include policies dealing specifically with the problems and needs of rural women. However, implementation of these policies does not appear to have been effective (McFarlane 1996).

Generally speaking, government agricultural policies have not adopted an integrated, systematic approach to gender differences in food production and the structure of rural employment. The isolated attempts to formulate and implement specific policies for rural women, or certain components of macro policies and programs, provide no systematic set of experiences that could be copied in other countries. On the whole, policies aimed specifically at eliminating gender inequality have had low priority, in some cases consisting of little more than aid programs. They are not institutionalized and depend heavily on external cooperation resources.

### *Inadequate Response of Public Policies to Small Farm Production and Women Producers*

Summing up, it is clear that public policies have failed to provide solutions to the problems of small farm production and women producers. The response of government agencies and central governments to the complex question of gender-specific participation in the production, management and reproduction processes of small farms has been limited, incoherent and detrimental to small-farm economies and women alike.

The response has been limited because, faced with the scale of this sector's participation in domestic food supply and the contribution made by women, most countries have resorted to stopgap policies not integrated in the mainstream of development or with aid programs for the poorest groups.

The solutions provided have also been inconsistent with the objectives of social equity mentioned repeatedly by governments in their development plans, and with the goal of achieving food security that was a recurring theme of economic policies during the last decade. Measures that have reduced the supply of food and restricted the productivity of small farmers of both sexes have merely weakened the sector and multiplied or exacerbated the social and gender inequalities which have been know to exist for decades.

Finally, the response has been detrimental to small farms and rural women for a number of reasons: firstly, because they have led to the concentration of income and resources; secondly, because there has been a tendency to eliminate rural development programs and, with them, the supply of services and resources for poor groups; and thirdly, because they reproduced cultural models that discriminate against women or made their participation invisible.

# 10. CONCLUSIONS

1. The IICA/IDB study covered a heterogeneous group of countries with very different cultural, economic and social characteristics. Their level of human development also varied widely. Barbados and Costa Rica, for example, appeared in 25th and 28th place, respectively, in the world Human Development Index, while other countries occupy much lower positions, such as Guyana (105), Nicaragua (109), El Salvador (115) and Honduras (116). The study also covered countries whose citizens enjoy relatively high levels of well-being and rights, and others where poverty and inequality are widespread.

2. During the first half of the 1990s, LAC as a whole showed signs of a recovery in economic growth. However, the disparities between and within countries and between the rural and urban sectors, point to the continued existence of structural problems regarding development and equity. Poverty is growing or, at best, not being reduced; inequalities in the distribution of income and productive resources persist; and small farmers have had to cope with free market conditions that make them more vulnerable.

3. The structural characteristics of the economies of small farms have not changed significantly. In most countries, access to productive resources continues to be limited (high concentration of land ownership and income, for example), and the legal ownership of farm land is precarious. Furthermore, part of the population still gets no pay for the work it does and the situation has actually grown worse in countries where real rural wages have fallen.

4. As a result of current macroeconomic policies, the economic liberalization that they have produced and the integration of markets in the region, imports have become essential to guarantee food supplies, especially for the urban population. However, the countries still depend heavily on domestic supplies of food. Small farms or the small-farm economy - the focus of this study - continue to play a key role in supplying food for direct consumption.

5. Indexes developed to gauge equality between the sexes have a significant impact on the countries' overall human development rating. Thus, a country like Costa Rica, which ranks 28th, placing it among the countries with the highest levels of human development, drops to 42nd place in the Development Index Related to Women (IDM). Other countries move up the list. El Salvador, for example, moves from 115th in the HDI to 76th in the IDM. The lesson, then, is that the benefits of development and growth are not distributed equally between men and women. If equity is to be achieved, a definite political commitment, explicit public policies and goals for combating gender discrimination are called for.

6. Research in the countries confirms methodological problems regarding the measurement of the economic contribution of women in agriculture and the form that this contribution takes. There is a false statistical base that creates

an inadequate understanding of the performance of small farms and of the rural and indigenous women living and working on them.

7. When statistics from government censuses and surveys of households were compared with the findings of the study and the surveys conducted in each country, it was evident that much of the economic activity carried out by rural women goes unrecorded. When an exercise was undertaken to measure the extent of this problem, the new estimates showed that the economic participation of women was, generally speaking, two to three times greater than official statistics suggested.

8. The participation of women in the different agricultural subsystems that make up small-scale production is structural and permanent, encompassing every phase and activity of the productive cycle (though variations were detected in the scale and form that this takes), and an essential rather than a complementary part of reproduction and accumulation (where it occurs) in small production units. It was also shown that this participation takes place within a framework of agreements between men, women and other family members, with the result that there are specific, varying and flexible divisions within productive work. This means that small farms are composed of mixed and family systems, rather than male systems.

9. The flexibility of agreements between the genders regarding the distribution of productive tasks does not apply in the case of reproductive work; a rigid demarcation between the two areas is maintained, i.e., reproductive work is exclusively the domain of women and children. This is the reason why, when the contribution of each gender to total household work was measured in the Andean countries, women were found to contribute an average of 60% and men, 40%.

10. This structural participation is reflected in the significant contribution women make to: a) family income, ranging from 30-45%; b) the agricultural gross domestic product, shown by the study in the Andean region; c) the alleviation of poverty through the income they generate and the work they perform; and d) the total amount of work involved in farm production (women perform 60%).

11. Further proof of the existence of mixed agricultural systems is the variety of arrangements within the decision-making process. It was discovered that agricultural decisions are not the sole prerogative of men. Women stated that they, alone or together with men, participated in decisions related to production. However, such decisions are made in the context of the subordination of one gender to the other which characterizes rural culture.

12. The countries have made efforts to achieve greater gender equity. Agrarian legislation containing provisions that discriminated against women's access to land or land title has been amended; national policies in favor of women and, in a few cases, specific policies for rural women, have been designed;

government agencies (women's bureaus, interinstitutional commissions, secretariats with ministerial rank and others) have been created to coordinate the implementation of these policies and programs; specialists and senior administrators have been trained; and specific programs have been created to provide services and resources. However, all the evidence indicates that these efforts have not been enough to effectively incorporate the issue into the mainstream of national development, distribute resources equitably and place gender equity high on the development agenda.

Generally speaking, government agricultural policies have not adopted an integrated, systematic approach to gender differences in food production and the structure of rural employment. Isolated attempts to formulate and execute specific policies for rural women, or certain components of macro policies and programs, provide no systematized experiences that could be copied in other countries. On the whole, policies aimed explicitly at eliminating gender inequality have had a low priority, consisting in some cases of little more than aid programs. They are not institutionalized and depend heavily on external cooperation resources. It was found that the lack of operating instruments has hindered the analysis of gender in programs and projects designed to open the way for the implementation of agricultural policies.

13. Summing up, in recent years the response of government agencies and central governments to the complex question of gender-specific participation in the production, management and reproduction processes of small farms has been limited, incoherent and detrimental to small-farm economies and women alike. The response has been limited because, faced with the scale of this sector's participation in the domestic supply of food and the contribution made by women, most of the countries have resorted to stopgap policies not integrated with the mainstream of development, or with aid programs for the poorest groups.

    The solutions provided have also been inconsistent with the objectives of social equity mentioned repeatedly by governments in their development plans, and with the goal of achieving food security that was a recurring theme of the economic policies of the 1980s. Measures that have reduced the supply of food and restricted the productivity of small farmers of both sexes have merely weakened the sector and reproduced or exacerbated the social and gender inequalities that have been known to exist for decades. Finally, the response has been detrimental to small farms and rural women for a number of reasons: 1) because they have led to the concentration of income and resources; 2) because there has been a tendency to eliminate rural development programs and, with them, the supply of services and resources for poor groups; 3) because they reproduced cultural models that discriminate against women or made their participation invisible.

14. Looking to the future, urgent measures are called for in order to: overcome the statistical and social invisibility of women food producers; incorporate the

gender issue into the formulation, execution and monitoring of public agricultural policies; make a concerted effort to give practical expression to the concept in the new rural development programs, the execution of which will entail new approaches and new participants (especially civil society organizations); ensure that the alleviation of poverty and social development strategies reach rural women; and standardize the policy frameworks used to promote their participation.

## *Table I.1.*
## *Indexes of human development and progress made by women.*

| | Human Development Index (HDI) | | Women's Development Index (WDI) | | Women's Empowerment Index (WEI) | |
|---|---|---|---|---|---|---|
| | **Index** | **Position** | **Index** | **Position** | **Index** | **Position** |
| Barbados | 0.900 | 25 | 0.878 | 11 | 0.545 | 12 |
| Bolivia | 0.588 | 113 | 0.519 | 80 | 0.344 | 65 |
| Brazil | 0.804 | 63 | 0.709 | 53 | 0.358 | 58 |
| Colombia | 0.836 | 57 | 0.720 | 50 | 0.435 | 29 |
| Costa Rica | 0.883 | 28 | 0.763 | 42 | 0.474 | 22 |
| Ecuador | 0.784 | 68 | 0.641 | 60 | 0.375 | 53 |
| El Salvador | 0.579 | 115 | 0.533 | 76 | 0.397 | 44 |
| Guatemala | 0.591 | 112 | 0.481 | 87 | 0.390 | 46 |
| Guyana | 0.622 | 105 | 0.584 | 70 | 0.461 | 25 |
| Honduras | 0.578 | 116 | 0.524 | 77 | 0.406 | 39 |
| Jamaica | 0.721 | 88 | 0.710 | 52 | - | - |
| Nicaragua | 0.611 | 109 | 0.560 | 73 | 0.427 | 34 |
| Panama | 0.856 | 49 | 0.765 | 41 | 0.430 | 33 |
| Paraguay | 0.723 | 87 | 0.628 | 63 | 0.343 | 66 |
| Peru | 0.709 | 93 | 0.631 | 62 | 0.400 | 41 |
| Suriname | 0.762 | 77 | 0.699 | 54 | 0.348 | 64 |
| Uruguay | 0.881 | 32 | 0.802 | 32 | 0.361 | 57 |
| Venezuela | 0.859 | 47 | 0.765 | 40 | 0.391 | 45 |

Notes: The HDI is composed of three indicators: life expectancy, educational level and real GDP; 174 countries are included in the index.
The WDI measures the degree of progress made in the areas covered by the HDI, but also incorporates inequality between men and women; the performance of 130 countries is assessed. The WEI measures whether women and men are in a position to participate actively in economic and political life and decision making; 116 countries are covered.

**Source:** UNDP 1995.

***Table I.2.***
***Sociodemographic characteristics of rural women.***

| | Female population (%) | | Fertility rate by women (and year) | Illiteracy rate (%) | Women heads of household (%) | Population with access to a piped water supply (%) |
|---|---|---|---|---|---|---|
| | Urban | Rural | | | | |
| Barbados | - | - | - | - | 47 | - |
| Bolivia | 53 | 47 | 6.3 (1992) | 49.9 | 17 | 21 |
| Brazil (South) | 75 | 25 | - | 34.7 | 12 | 68 |
| Colombia | 72 | 28 | 3.8 (1990) | - | 19 | 90 |
| Costa Rica | 48 | 52 | 4.1 (1985) | - | 34 | 68 |
| Ecuador | 57 | 43 | 5.5 (1987) | 25.1 | 33 | 45 |
| El Salvador | 49 | 51 | 5.9 (1985) | - | 47 | 16 |
| Guatemala | 39 | 61 | 6.5 (1987) | 60 | 43 | 51 |
| Guyana | - | - | - | - | 40 | - |
| Honduras | 43 | 57 | 7.0 (1988) | - | 29 | 54 |
| Jamaica | - | - | - | - | 57 | - |
| Nicaragua | 56 | 44 | 6.4 (1992) | 38.7 | 31 | 30 |
| Panama | 55 | 45 | 5.4 (1976) | - | 27 | 65 |
| Paraguay | 49 | 51 | 6.1 (1990) | - | 8 | 17 |
| Peru | 70 | 30 | 6.2 (1992) | 45.6 | 13 | 24 |
| Suriname | - | - | - | - | 34 | - |
| Uruguay | 91 | 9 | 2.8 (1985) | - | 14 | - |
| Venezuela | 84 | 16 | 6.1 (1981) | - | 34 | 67 |

**Sources:** Women heads of household: IICA/IDB Women Food Producers Surveys 1991 (Central America) and 1993 (rest of countries). The other columns: FLACSO 1995.

## *Table I.3.*
## *Indicators of time women devote to agricultural production.*

I. Percentages of relative contribution by gender to all family time devoted to agricultural production./1

| | Agricultural production | | Livestock production | | Transformation | | Marketing | |
|---|---|---|---|---|---|---|---|---|
| | Women | Men | Women | Men | Women | Men | Women | Men |
| Bolivia | 53 | 47 | 69 | 31 | 68 | 32 | 73 | 27 |
| Colombia | 42 | 58 | 68 | 32 | 100 | 0 | 51 | 49 |
| Ecuador | 30 | 70 | 74 | 26 | 75 | 25 | 60 | 41 |
| Peru | 57 | 43 | 77 | 23 | 100 | 0 | 84 | 16 |
| Venezuela | 44 | 56 | 44 | 56 | 100 | 0 | 73 | 27 |

II. Average number of hours that women responsible for family survival devote to productive and reproductive activities.

| | Average total number of hours worked/day | Productive activities | | Reproductive activities | |
|---|---|---|---|---|---|
| | | Agricultural/2 | Handicrafts for sale | Household | Community |
| Bolivia | 16.3 | 6.7 | 1.0 | 8.4 | 0.2 |
| Colombia | 13.2 | 4.0 | 0.5 | 8.6 | 0.1 |
| Costa Rica | 16.0 | 6.5 | - | 7.0 | - |
| Ecuador | 15.1 | 6.5 | 0.5 | 8.1 | 0.0 |
| El Salvador | 16.0 | 9.1 | - | 9.8 | - |
| Panama | 18.0 | 7.6 | 0.5 | 7.1 | - |
| Peru | 14.7 | 6.0 | 0.5 | 8.0 | 0.2 |
| Venezuela | 17.4 | 3.9 | 3.0 | 9.9 | 0.6 |

/1 Each activity sums row wise to 100%.
/2 Includes work on farm and garden.

**Sources:** IICA/IDB Rural Women Food Producers Surveys 1991 (Central America) and 1993 (rest of countries).

***Table I.4.***
***Official and estimated women's participation in agriculture/rural sector/1.***

| | Official sources EAP | | Reestimations of women's participation | Percent increase re-est: official |
|---|---|---|---|---|
| | Year | agricultural or rural sector | | |
| CENTRAL AMERICA | | 183,561 | 836,500 | 356 |
| Costa Rica | 1991 | 20,937 | 70,000 | 234 |
| El Salvador | 1991 | 60,200 | 135,000 | 124 |
| Guatemala | 1989 | 58,300 | 350,000 | 500 |
| Honduras | 1985 | 35,024 | 150,000 | 200 |
| Nicaragua | - | - | 105,000 | - |
| Panama | 1991 | 9,100 | 26,500 | 191 |
| ANDEAN REGION | | 4,913,836 | 9,630,000 | 96 |
| Bolivia | 1992 | 644,930 | 1,194,000 | 85 |
| Colombia | 1993 | 1,686,799 | 3,682,000 | 118 |
| Ecuador | 1990 | 735,329 | 1,102,000 | 50 |
| Peru | 1991 | 1,666,778 | 3,077,000 | 85 |
| Venezuela | 1992 | 180,000 | 575,000 | 219 |
| SOUTHERN CONE | | 88,289 | 261,000 | 196 |
| Paraguay | 1992 | 60,442 | 214,000 | 254 |
| Uruguay | 1985 | 27,847 | 47,000 | 69 |
| CARIBBEAN REGION | | | | |
| Barbados | 1992 | 1,900 | 13,000 | 584 |
| Guyana | 1993 | 4,991 | 13,000 | 160 |
| Jamaica | 1992 | 60,500 | 167,000 | 176 |
| Suriname | 1981 | 12,720 | 53,000 | 317 |

/1 Andean and Southern Cone countries refer to rural sector; all other countries to agriculturall sector. Reestimations corresponding.

**Sources, Official Data:** Barbados, Statistical Service; Costa Rica, Encuesta Nacional de Hogares; Ecuador, INEM, Encuesta Hogares Rurales; Guatemala, Encuesta Nacional; Jamaica, STATIN, Labour Force Stats; Nicaragua, ESDENIC; Panama, Censo Agropecuario; Peru, ENNIV; Suriname, Census of Agriculture; Bolivia, Colombia, El Salvador, Honduras, Paraguay, Uruguay and Venezuela, Census of Population and Housing in their respective countries.

**Sources, Reestimations:** Women Food Producers Project Documents, For Central America: R. Grynspan; Andean Region: S. Ochoa; Southern Cone: G. Ocampos, Ma. Peaguda; Caribbean:R. Defares, D. Cummins, F. Innerarity, S. Odie-Ali.

***Table I.5.***
***Family composition in small farm production units.***

| | Total number of family members | Children | Productive ages /1 | | Seniors |
|---|---|---|---|---|---|
| | | | Women | Men | |
| Barbados | 4.3 | 0.9 | 1.5 | 1.2 | 0.7 |
| Bolivia | 4.2 | - | - | - | - |
| Brazil (South) | 5.0 | 1.3 | 1.6 | 1.8 | 0.3 |
| Colombia | 5.2 | 1.3 | 2.6 | 1.2 | 0.1 |
| Ecuador | 5.1 | 1.7 | 2.2 | 1.1 | 0.1 |
| El Salvador | 6.0 | - | - | - | - |
| Guyana | 5.1 | 1.6 | 1.6 | 1.6 | 0.3 |
| Honduras | 7.5 | - | - | - | - |
| Jamaica | 5.6 | 2.2 | 1.6 | 1.2 | 0.6 |
| Peru | 6.5 | 2.3 | 3.1 | 1.2 | - |
| Suriname | 5.3 | 1.4 | 1.5 | 1.5 | 0.9 |
| Uruguay | 4.0 | 1.2 | 1.0 | 0.8 | 1.0 |
| Venezuela | 6.0 | 1.3 | 2.7 | 1.5 | 0.5 |

/1 Includes adult men and women, as well as children and adolescents between 10 and 15 years of age, by country and the age at which an individual becomes part of the economically active population.

**Source:** IICA/IDB Rural Women Food Producers Surveys 1991 and 1993.

***Table 1.6.***
***General indicators of women's productive responsibilities in small-farm agricultural households (percentages).***

| | Households headed by women | Men work off-farm/1 |
|---|---|---|
| Barbados | 47 | 73 |
| Bolivia | 17 | - |
| Brazil (South) | 20 | - |
| Colombia | 19 | 16 |
| Costa Rica | 34 | 27 |
| Ecuador | 33 | 47 |
| El Salvador | 47 | - |
| Guatemala | 43 | 20 |
| Guyana | 40 | 26 |
| Honduras | 29 | 30 |
| Jamaica | 57 | 20 |
| Nicaragua | 31 | - |
| Panama | 27 | 21 |
| Paraguay | 8 | 48 |
| Peru | 13 | 0 |
| Suriname | 34 | 55 |
| Uruguay | 14 | 10 |
| Venezuela | 55 | 37 |

/1 Temporarily or permanently.

**Sources:** IICA/IDB Rural Women Food Producers Surveys 1991 (Central America ) and 1993 (rest of countries).

***Table I.7.***
***Primarily responsible women's participation in household and community activities (% of surveyed women).***

**I. Household activities**

| | Wood collection | Water transportation | Laundry | Food preparation |
|---|---|---|---|---|
| Barbados | na | na | 66 | 63 |
| Brazil (South) | - | - | 86 | 87 |
| Colombia | 29 | 29 | 96 | 92 |
| Ecuador | 61 | 49 | 96 | 95 |
| Guyana | 24 | 36 | 79 | 93 |
| Jamaica | 32 | 31 | 90 | 94 |
| Paraguay | 80 | 94 | 97 | 81 |
| Peru | 58 | 54 | 90 | 95 |
| Uruguay | 79 | 69 | 97 | 97 |
| Venezuela | 35 | 34 | 91 | 98 |

**II. Community activities**

| | Productive organizations | Social/ religious | Education/ health | Other |
|---|---|---|---|---|
| Barbados | 23 | 40 | 12 | 2 |
| Bolivia | 29 | - | 26 | 25 |
| Colombia | 7 | - | 27 | 9 |
| Ecuador | 14 | - | 27 | 27 |
| El Salvador | 21 | 73 | 30 | 26 |
| Guyana | 1 | 18 | 24 | 2 |
| Jamaica | 2 | 62 | 32 | 8 |
| Panama | 6 | - | - | - |
| Peru | 3 | - | 27 | 15 |
| Suriname | 5 | 39 | - | 1 |
| Uruguay | 17 | - | 31 | 2 |
| Venezuela | 49 | - | 35 | 13 |

na: Not applicable.

**Sources:** IICA/IDB Rural Women Food Producers Surveys 1991 (Central America) and 1993 (rest of countries).

## *Table I.8.*
## *Contribution of family members to household income (percentages).*

| | Total | Women | Other family members | | |
|---|---|---|---|---|---|
| | | | Total | Men | Children |
| Andean Region/1 | | | | | |
| Bolivia | 100 | 47 | 53 | 47 | 6 |
| Colombia | 100 | 47 | 53 | 50 | 3 |
| Ecuador | 100 | 37 | 63 | 45 | 18 |
| Peru | 100 | 66 | 34 | 21 | 13 |
| Venezuela | 100 | 43 | 57 | 43 | 14 |
| Southern Cone/2 | | | | | |
| Brazil (South) | 100 | 27 | 73 | - | - |
| Paraguay | 100 | 41 | 59 | 59 | - |
| Uruguay | 100 | 34 | 66 | - | - |

/1 Estimate of total monetized and non-monetized household income, excluding remittances, based on annual number of hours worked by household members in farm activities, on-farm industrial activities (production destined for market), and off-farm labor. Children's labor adjusted for productivity differentials. Time spent on handicrafts and women's off-farm labor time adjusted by national female/male wage rate differentials.

/2 Disaggregation by "other family members" unavailable unless indicated. Brazil refers to income-generated from on-farm agricultural activities only. Includes remittances by men and women in Paraguay. Women refers to respondent only in Uruguay.

**Sources:** IICA/IDB Rural Women Food Producers Surveys 1993.

## *Table I.9.*
## *Gender differences in the distribution of real effort in productive activities/1 (percentages).*

| | | Total | On-farm activities | | | Off-farm activities |
|---|---|---|---|---|---|---|
| | | | Total | Farming | Handicrafts and others | Wage labor |
| Barbados | Women | 100 | 77 | 77 | - | 23 |
| | Men | 100 | 27 | 27 | - | 73 |
| Bolivia | Women | 100 | 98 | 92 | 6 | 2 |
| | Men | 100 | 87 | 86 | 1 | 13 |
| Brazil (South) | Women | 100 | 87 | 87 | - | 13 |
| | Men | 100 | 70 | 70 | - | 30 |
| Colombia | Women | 100 | 92 | 83 | 9 | 8 |
| | Men | 100 | 85 | 80 | 5 | 15 |
| Ecuador | Women | 100 | 84 | 75 | 9 | 16 |
| | Men | 100 | 57 | 56 | 1 | 43 |
| Guyana | Women | 100 | 77 | 77 | - | 23 |
| | Men | 100 | 74 | 74 | - | 26 |
| Jamaica | Women | 100 | 85 | 85 | - | 15 |
| | Men | 100 | 80 | 80 | - | 20 |
| Paraguay | Women | 100 | 85 | 48 | 37 | 15 |
| | Men | 100 | 82 | 55 | 16 | 18 |
| Peru | Women | 100 | 100 | 86 | 14 | 0 |
| | Men | 100 | 100 | 94 | 6 | 0 |
| Suriname | Women | 100 | 82 | 82 | - | 18 |
| | Men | 100 | 45 | 45 | - | 55 |
| Uruguay /2 | Women | 100 | 80 | 80 | - | 24 |
| | Men | 100 | 72 | 72 | - | 29 |
| Venezuela | Women | 100 | 79 | 63 | 16 | 21 |
| | Men | 100 | 57 | 57 | 0 | 43 |

/1 Based on hours per year in the Andean countries and Brazil; on income in Paraguay and Uruguay; and declared principal activities in the Caribbean countries. For the countries of the Caribbean and Southern Cone disaggregation by "handicrafts and others" not available.

/2 Women refers to respondent only. Men refers to rest of family, and includes other female family members.

**Sources:** IICA/IDB Rural Women Food Producers Surveys 1993.

## *Table I.10.*
## *Frequency of participation by sex in food crop production (% of small farm units surveyed).*

| | | Land preparation | Preharvest | | | Post-harvest | Marketing Sales |
|---|---|---|---|---|---|---|---|
| | | | Planting | Crop care | Harvest | | |
| LAC average | Women | 38 | 60 | 46 | 70 | 51 | 49 |
| | Men | 64 | 65 | 69 | 63 | 39 | 48 |
| Barbados | Women | 59 | 73 | 82 | 86 | 81 | 77 |
| | Men | 26 | 23 | 59 | 44 | 46 | 44 |
| Bolivia | Women | 55 | 97 | 51 | 93 | 72 | 68 |
| | Men | 92 | 96 | 59 | 90 | 62 | 45 |
| Colombia | Women | 14 | 41 | 16 | 48 | 26 | 36 |
| | Men | 76 | 95 | 50 | 81 | 49 | 87 |
| Costa Rica | Women | 57 | 59 | 38 | 47 | 30 | 10 |
| | Men | - | - | - | - | - | - |
| Ecuador | Women | 66 | 97 | 44 | 84 | 27 | 40 |
| | Men | 78 | 73 | 47 | 79 | 19 | 39 |
| El Salvador | Women | 54 | 47 | 59 | 62 | 70 | 48 |
| | Men | - | - | - | - | - | - |
| Guatemala | Women | 29 | 40 | 34 | 57 | 35 | 27 |
| | Men | - | - | - | - | - | - |
| Guyana | Women | 46 | 50 | 45 | 47 | 46 | 40 |
| | Men | 50 | 28 | 78 | 35 | 35 | 55 |
| Honduras | Women | 47 | 51 | 39 | 61 | 61 | 33 |
| | Men | - | - | - | - | - | - |
| Jamaica | Women | 51 | 69 | 59 | 73 | 69 | 57 |
| | Men | 38 | 45 | 75 | 54 | 54 | 40 |
| Panama | Women | 60 | 65 | 59 | 70 | 56 | 17 |
| | Men | - | - | - | - | - | - |
| Paraguay | Women | 12 | 47 | 18 | 84 | 85 | 26 |
| | Men | 84 | 91 | 83 | 81 | 49 | 44 |
| Peru | Women | 59 | 92 | 42 | 92 | 63 | 60 |
| | Men | 98 | 96 | 72 | 96 | 56 | 28 |
| Suriname | Women | 87 | 91 | 86 | 88 | 67 | 75 |
| | Men | 61 | 61 | 100 | 76 | 36 | 50 |
| Uruguay | Women | 30 | 50 | 48 | 84 | 76 | 38 |
| | Men | 84 | 78 | 88 | 88 | 78 | 78 |
| Venezuela | Women | 31 | 52 | 58 | 36 | 9 | 84 |
| | Men | 76 | 83 | 84 | 42 | 15 | 78 |

/1 Represents average participation in two food crops. Central America refers to corn only.
/2 Includes only those countries with information disaggregated by gender.

**Sources:** IICA/IDB Rural Women Food Producers Surveys 1991 (Central American countries) and 1993 (rest of countries).

**Note:** The percentage of plots on which men and women participate in an activity does not necessarily total 100%. This is because participation by activity is not exclusive to either gender on the vast majority of small farms in Latin America andthe Caribbean. In those instances where the activities do not add up to 100%, this is because the activity is not carried out by adult male and female household members (in other words, outside laborers are hired or the activity is carried out by other family members - e.g. children may collect eggs and perform other tasks) or simply is not carried out for the crops studied on some of the farms surveyed (e.g. postharvest processing or marketing).

*Table I.11. Frequency of participation by sex in livestock production/1 (% of small-farm units surveyed).*

| | | Large stock/2 | | | | Small stock/3 | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | Feeding/ grazing | Breeding | Animal health | Product extraction/4 | Feeding/ grazing | Breeding | Animal health | Product extraction/4 |
| LAC average | Women | 45 | 15 | 24 | 41 | 56 | 26 | 46 | 34 |
| | Men | 39 | 26 | 46 | 31 | 29 | 11 | 14 | 8 |
| Barbados | Women | 41 | 29 | 35 | 35 | 59 | 13 | 44 | 26 |
| | Men | 11 | 18 | 6 | 6 | 1 | 9 | 10 | 2 |
| Bolivia | Women | 52 | 20 | 37 | 58 | 60 | 34 | 78 | 58 |
| | Men | 36 | 30 | 54 | 24 | 2 | 1 | 12 | 2 |
| Colombia | Women | 25 | 14 | 64 | 54 | 23 | 6 | 73 | 2 |
| | Men | 22 | 22 | 34 | 54 | 8 | 7 | 17 | 2 |
| Ecuador | Women | 54 | 5 | 18 | 37 | 77 | 25 | 65 | 40 |
| | Men | 47 | 12 | 66 | 44 | 40 | 9 | 1 | 21 |
| El Salvador | Women | - | | - | - | 76 | | - | - |
| | Men | - | | - | - | - | | - | - |
| Guyana | Women | 27 | 11 | 5 | 16 | 71 | 50 | 11 | 5 |
| | Men | 23 | 57 | 7 | 30 | 20 | 41 | 5 | 4 |
| Honduras | Women | - | | - | - | 66 | | - | - |
| | Men | - | | - | - | - | | - | - |
| Jamaica | Women | 42 | 5 | 24 | 8 | 72 | 5 | 41 | 10 |
| | Men | 68 | 24 | 37 | 11 | 21 | 5 | 18 | 0 |
| Panama | Women | - | - | - | - | 90 | | - | - |
| | Men | - | - | - | - | - | | - | - |
| Paraguay | Women | 57 | - | 11 | 72 | 11 | - | - | 97 |
| | Men | 44 | - | 65 | 1 | 95 | - | - | 6 |
| Peru | Women | 24 | 1 | 8 | 29 | 78 | 71 | 60 | - |
| | Men | 27 | 1 | 74 | 25 | 58 | - | 26 | - |
| Suriname | Women | 52 | 36 | 16 | 44 | 59 | 4 | 6 | 51 |
| | Men | 14 | 64 | 20 | 40 | 6 | 0 | 0 | 12 |
| Uruguay | Women | 62 | - | 36 | 42 | 48 | - | 19 | 32 |
| | Men | 62 | - | 65 | 47 | 21 | - | 21 | 21 |
| Venezuela | Women | 59 | 11 | 8 | 57 | 86 | 29 | 60 | 14 |

/1 Represents average participation with a variety of animals. Denominators adjusted.
/2 Large stock refers to beef and dairy cattle.
/3 Small stock refers to sheep, pigs, poultry and all other kinds of small animals raised on farms.
/4 Product extraction includes milking, slaughtering, dressing, shearing, egg collection, etc. as appropriate.
/5 Includes only those countries with information disaggregated by gender.

**Sources:** IICA/IDB Rural Women Food Producers Surveys 1991 (Central American countries) and 1993 (rest of countries).

**Note:** The percentage of plots on which men and women participate in an activity does not necessarily total 100%. This is because participation by activity is not exclusive to either gender on the vast majority of small farms in Latin America and the Caribbean. In those instances where the activities do not add up to 100%, this is because the activity is not carried out by adult male and female household members (in other words, outside laborers are hired or the activity is carried out by other family members - e.g. children may collect eggs and perform other tasks) or simply is not carried out for the crops studied on some of the farms surveyed (e.g. postharvest processing or marketing).

***Table I.12.***
***Relative gender participation in farm management and production decisions by country (percentages).***/1

| | Total | Her decision | His decision | Both decide |
|---|---|---|---|---|
| LAC average | 100 | 31 | 25 | 45 |
| Barbados | 100 | 63 | 5 | 32 |
| Bolivia | 100 | 34 | 18 | 48 |
| Brazil (South) | 100 | 7 | 34 | 58 |
| Colombia | 100 | 16 | 47 | 38 |
| Ecuador | 100 | 32 | 24 | 45 |
| El Salvador | 100 | 42 | 27 | 32 |
| Guyana | 100 | 35 | 16 | 50 |
| Jamaica | 100 | 53 | 7 | 40 |
| Panama | 100 | 32 | 29 | 38 |
| Paraguay | 100 | 22 | 28 | 50 |
| Peru | 100 | 21 | 46 | 34 |
| Suriname | 100 | 38 | 18 | 45 |
| Uruguay | 100 | 9 | 31 | 61 |
| Venezuela | 100 | 25 | 17 | 59 |

/1 Average of decisions on what and when to plant; types of inputs to use and implements to purchase; type of livestock to rear, organization of tasks and general management; quantity to consume/sell; where/to whom to sell; use of monetary profits/ income; request/use financing/loans.

**Sources:** IICA/IDB Rural Women Food Producers Surveys 1991 (Central American countries) and 1993 (rest of countries).

***Table I.13.***
***Relative gender participation in farm management and production decisions by type of decision (relative distribution per decision in %).***

| | What and when to plant | | | Types of inputs and implement purchase | | | Types of livestock | | | Org. product tasks Gnl. management | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | She does | He does | Both do | She does | He does | Both do | She does | He does | Both do | She does | He does | Both do |
| Barbados | 64 | 4 | 32 | 62 | 5 | 34 | 63 | 6 | 31 | 53 | 21 | 26 |
| Bolivia | 19 | 23 | 58 | 16 | 25 | 60 | 40 | 7 | 54 | 21 | 32 | 48 |
| Brazil (South) | 6 | 32 | 62 | 6 | 53 | 41 | 10 | 19 | 71 | - | - | - |
| Colombia | 13 | 53 | 35 | 11 | 64 | 27 | 36 | 25 | 40 | 10 | 58 | 33 |
| Ecuador | 23 | 22 | 55 | 22 | 36 | 43 | 47 | 9 | 44 | 30 | 27 | 44 |
| El Salvador | 36 | 25 | 39 | 36 | 50 | 15 | - | - | - | - | - | - |
| Guyana | 30 | 16 | 54 | 24 | 32 | 45 | 57 | 7 | 36 | 31 | 20 | 50 |
| Jamaica | 20 | 8 | 72 | 64 | 10 | 26 | 71 | 7 | 22 | 66 | 3 | 31 |
| Panama | 26 | 40 | 34 | 29 | 56 | 15 | - | - | - | - | - | - |
| Paraguay | 10 | 44 | 46 | 16 | 51 | 34 | 42 | 8 | 50 | 21 | 26 | 53 |
| Peru | 7 | 49 | 44 | 6 | 72 | 23 | 67 | 4 | 29 | 11 | 60 | 30 |
| Suriname | 41 | 19 | 40 | 34 | 26 | 40 | 41 | 14 | 45 | 39 | 14 | 48 |
| Uruguay | 8 | 40 | 52 | 8 | 45 | 48 | 13 | 22 | 66 | 9 | 25 | 67 |
| Venezuela | 17 | 16 | 66 | 17 | 17 | 67 | 18 | 14 | 69 | 36 | 28 | 37 |

| | Quantity to consume/ sell | | | Where/to whom to sell | | | Use of profits/ income | | | Financing/ loans | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | She does | He does | Both do | She does | He does | Both do | She does | He does | Both do | She does | He does | Both do |
| Barbados | 64 | 3 | 34 | 69 | 2 | 29 | 62 | 2 | 36 | 65 | 0 | 35 |
| Bolivia | 44 | 9 | 48 | 32 | 21 | 47 | 72 | 13 | 15 | 12 | 18 | 70 |
| Brazil (South) | 10 | 30 | 60 | 6 | 31 | 63 | - | - | - | 6 | 41 | 53 |
| Colombia | 28 | 32 | 41 | 9 | 60 | 32 | 10 | 37 | 53 | 12 | 47 | 42 |
| Ecuador | 42 | 10 | 49 | 35 | 32 | 33 | 34 | 23 | 43 | 24 | 30 | 46 |
| El Salvador | 44 | 23 | 33 | - | - | - | 50 | 10 | 40 | - | - | - |
| Guyana | 38 | 14 | 48 | 47 | 14 | 39 | 30 | 7 | 63 | 19 | 17 | 64 |
| Jamaica | 30 | 5 | 65 | 37 | 7 | 56 | 68 | 5 | 26 | 68 | 8 | 24 |
| Panama | 33 | 17 | 50 | 35 | 30 | 35 | 35 | 8 | 57 | 36 | 25 | 39 |
| Paraguay | 20 | 18 | 62 | 21 | 31 | 48 | 26 | 19 | 55 | - | - | - |
| Peru | 33 | 23 | 45 | 17 | 43 | 41 | 12 | 42 | 46 | 13 | 77 | 10 |
| Suriname | 40 | 16 | 44 | 38 | 19 | 43 | 37 | 10 | 53 | 30 | 26 | 43 |
| Uruguay | 9 | 31 | 60 | 10 | 35 | 52 | 8 | 15 | 77 | 4 | 33 | 63 |
| Venezuela | 41 | 19 | 41 | 22 | 18 | 60 | 42 | 20 | 39 | 3 | 2 | 95 |

/1 Each decision sums row wise to 100%.

**Sources:** IICA/IDB Rural Women Food Producers Surveys 1991 (Central American countries) and 1993 (rest of countries)

## *Table I.14.*
## *Relative participation by sex in production resources (percentages).*

| | Names in land titles and contracts/1 | | | Credit applications /2 | | | Training and technical assistance/3 | | |
|---|---|---|---|---|---|---|---|---|---|
| | Total | Women | Men | Total | Women | Men | Total | Women | Men |
| Barbados | 100 | 46 | 54 | 100 | 56 | 44 | 100 | 71 | 29 |
| Bolivia | 100 | 20 | 80 | 100 | 6 | 94 | 100 | 57 | 43 |
| Brazil (South) | 100 | 24 | 76 | 100 | 26 | 74 | - | - | - |
| Colombia | 100 | 41 | 59 | 100 | 36 | 64 | 100 | 25 | 75 |
| Costa Rica | 100 | 16 | 84 | - | - | - | 100 | 12 | 88 |
| Ecuador | 100 | 41 | 59 | 100 | 42 | 58 | 100 | 37 | 63 |
| El Salvador | 100 | 29 | 71 | - | - | - | - | - | - |
| Guatemala | 100 | - | - | - | - | - | - | - | - |
| Guyana | 100 | 42 | 58 | 100 | 28 | 72 | 100 | 6 | 94 |
| Honduras | 100 | 28 | 72 | - | - | - | - | - | - |
| Jamaica | 100 | 49 | 51 | 100 | 59 | 41 | 100 | 55 | 45 |
| Nicaragua | 100 | 9 | 91 | - | - | - | - | - | - |
| Panama | 100 | 42 | 58 | - | - | - | 100 | 52 | 48 |
| Paraguay | 100 | 19 | 81 | - | - | - | 100 | 26 | 74 |
| Peru | 100 | 33 | 77 | 100 | 6 | 94 | 100 | 26 | 74 |
| Suriname | 100 | 10 | 90 | 100 | 17 | 83 | 100 | 34 | 66 |
| Uruguay | 100 | 25 | 75 | 100 | 12 | 88 | - | - | - |
| Venezuela | 100 | 43 | 57 | 100 | 78 | 22 | 100 | 59 | 41 |

/1 Applicable to those cases in which the family has a written title or contract. Data adjusted to sex only. In some cases both names may appear.
/2 During the last three years.
/3 In one or more events, including seed production and selection, handling of agrochemicals, post-harvest handling and transformation, handicrafts, agricultural management and accounting, and marketing.

**Sources:** IICA/IDB Rural Women Food Producers Surveys 1991 (Central American countries) and 1993 (rest of countries).

## *Table I.15.*
## *Sources of farm financing and credit for small farmers (in percent).*

| | Usual source of financing | | Sources of farm credit | | | | Gender participation/4 | | |
|---|---|---|---|---|---|---|---|---|---|
| | Own/farm earnings | Total | Don't use/ Haven't request | Banks/2 | Coops / NGOs | Other informal sources/3 | Total | Women | Men |
| Barbados | 95 | 100 | 89 | 8 | 3 | - | 100 | 56 | 44 |
| Bolivia | - | 100 | 73 | 17 | 3 | 7 | 100 | 6 | 94 |
| Brazil (South) | 94 | 100 | 60 | 30 | 8 | 2 | 100 | 26 | 74 |
| Colombia | - | 100 | 41 | 47 | 2 | 10 | 100 | 36 | 64 |
| Ecuador | - | 100 | 49 | 19 | 0 | 32 | 100 | 42 | 58 |
| Guyana | 81 | 100 | 81 | 17 | 1 | 1 | 100 | 28 | 72 |
| Jamaica | 88 | 100 | 94 | 4 | 1 | 1 | 100 | 59 | 41 |
| Peru | - | 100 | 67 | 19 | 4 | 10 | 100 | 6 | 64 |
| Suriname | 91 | 100 | 90 | 8 | 1 | 1 | 100 | 17 | 83 |
| Uruguay | 95 | 100 | 69 | 17 | 13 | 1 | 100 | 12 | 88 |
| Venezuela | - | 100 | 47 | 49 | 1 | 3 | 100 | 22 | 78 |

1/ Based on loans received in the last three years.
2/ All types of banks: private, state, agricultural, etc.
3/ Includes local lenders, family members, others.
4/ Based on data regarding loans requests by gender.

**Sources:** IICA/IDB Rural Women Food Producers Surveys 1993.

*Table I.16.*
***Sources of agricultural and marketing information used by women food producers (% of surveyed women).***

| | Extension official | TV/radio | Relatives, friends and other persons | Newspapers/ almanacs |
|---|---|---|---|---|
| Barbados | 38 | 59 | 45 | 20 |
| Brazil (South) | - | 76 | - | - |
| Jamaica | 35 | 22 | 59 | 26 |
| Guyana | 14 | 44 | 85 | 27 |
| Suriname | 35 | 17 | 76 | 1 |

**Sources:** IICA/IDB Rural Women Food Producers Surveys 1993.

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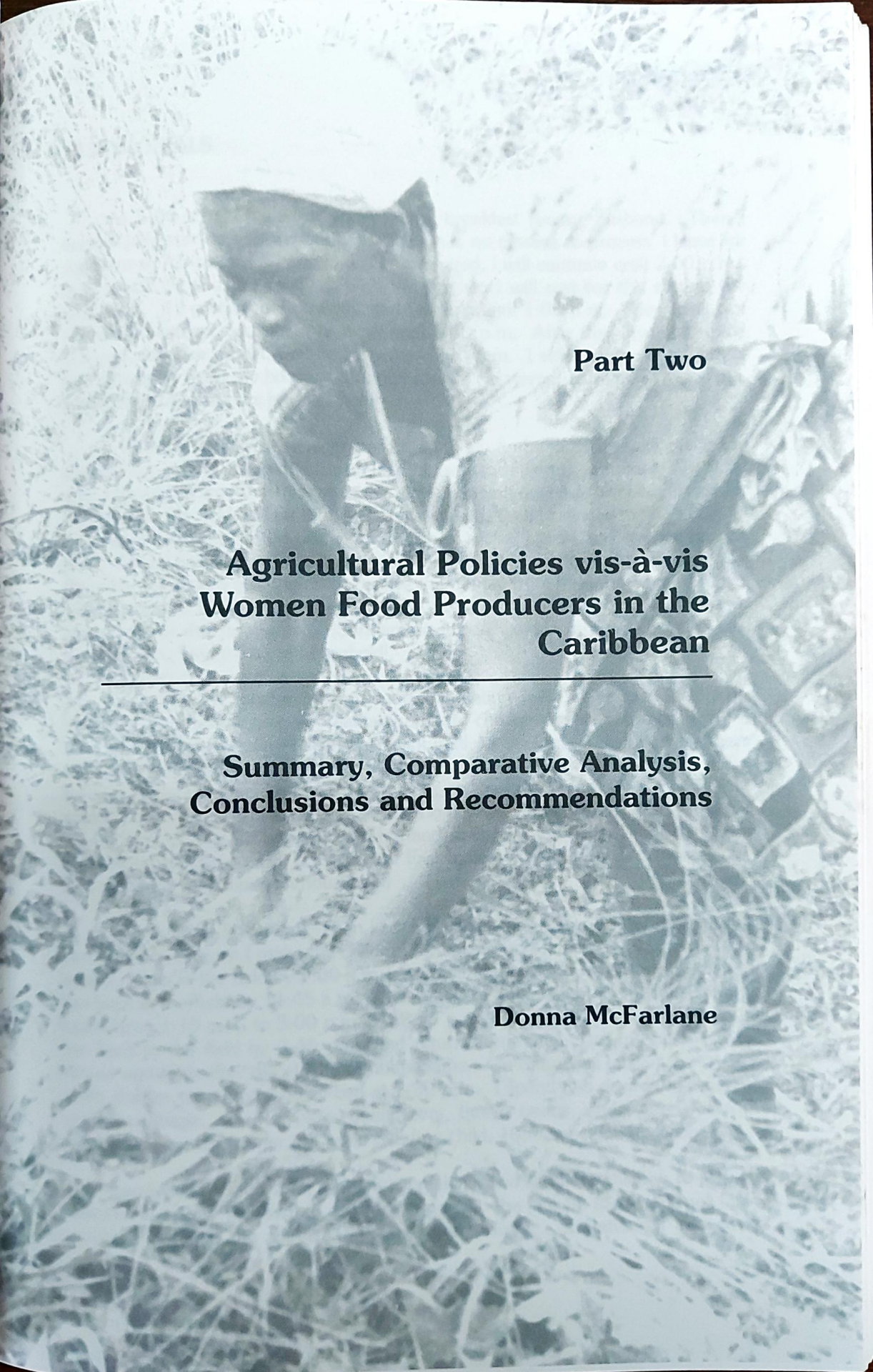


Part Two

# Agricultural Policies vis-à-vis Women Food Producers in the Caribbean

## Summary, Comparative Analysis, Conclusions and Recommendations

Donna McFarlane

## TESTIMONIALS

"At 5:00 a.m. I wake up and prepare breakfast for my husband. Then I immediately start processing cassava. If there is no cassava to process, I leave for the farm at 7:00 a.m. If cassava will be prepared, I will continue until 2:00 p.m., then it will be too hot to work with the fire, so I will rest for the rest of the afternoon. If I go to the plot, I will start working until 1:00 p.m. Then I will rest for two hours and start again to work until 5:00 p.m. After that, I will go home and rest, prepare dinner, and go to bed at 9:00 p.m. I sell cassava, napi, ginger and pineapple from my home." [Surinamese Creole woman farmer, 53 years old, 5 children, 11 members in household]

"I wake at 6:00 a.m. and prepare tea for my husband, and make ready the children for school. I wash dishes, clean house, wash clothes and cook. At 9:00 a.m. I travel half an hour by foot to the plot, and work until 12:00 noon. I rest for one hour in the field, unless it is the harvest period, then I rest only half an hour. I work until 5:00 p.m. I go home, wash dishes, sweep house, and rest for half an hour. Then I bathe, cook, eat and serve my family. I go to sleep at 9:00 p.m. On Saturday I rest, and go to town to receive the money from the intermediary. I sell okra, mustard leaves, callaloo, pepper, cassava, and mutton to agents and consumers at the farm-gate." [Surinamese Hindu woman farmer, 28 years old, two children, 5 members in household]

"I usually wake up at 4:30 a.m. but on marketing days I wake up at 2:00 a.m. I perform my toiletries, cook breakfast, prepare children for school, then at 8:00 a.m. I go to the Backdam (farm) and work until 12:00 p.m. I rest for two hours and sometimes eat lunch in the Backdam. Sometimes I return home to tie Bora for sale. This takes six hours. If not, I work on the farm until 6:00 p.m. When I return home I cook dinner, bathe, and do homework with children. I go to bed at 10:00 p.m. I take cabbage, bora, okra and squash to the market four days in a row during harvest to sell." [Guyanese East Indian woman farmer, 31 years old, two children, 9 members in household]

"I wake up at 5:30 a.m. Then I cook breakfast and transport my sister to her farm. When I return I make the children's breakfast and prepare and take them to school. I am in the field by 9:00 a.m. At 11:00 a.m. I bring my sister home and I am back in the field by 11:45 a.m. At 12:30 p.m. I eat lunch, and I start working again from 1:15 p.m. to 3:00 p.m. At 3:00 p.m. I transport the children home. I am back in the field by 3:45 p.m. and return home at 6:30 p.m. when I cook dinner and look after the children until bedtime. On Saturdays I clean the house, wash clothes, iron, etc. I go to bed at 7:30 p.m. I spend two days in the market selling cabbage, carrots, okra, cucumbers, beets, beans, and sweet potato." [Barbadian woman farmer, 33 years old, one child, 10 members in household]

"I wake up at 5:00 a.m, look after breakfast and send the children to school. Sometimes I go to the farm to do work or go with the pick-up to buy and sell farm produce. I go to the supermarket and return home. Sometimes I look after

dinner or a female relative will cook. We share washing and ironing the clothes, and sometimes I do a little sewing in the night. I go to sleep at 12 midnight. I sell vegetables that I produce, and I also buy and sell tomato, lettuce, carrot, cabbage, pumpkin and irish potato to the hotel industry." [Jamaican woman farmer - 34-years-old - 6 children - 12 in HH]

"I wake up at 5:00 a.m. and help my daughter to prepare for school. Then I tidy the house; go to the field; cook lunch; wash; and cook dinner. On Tuesday, I collect and process cassava. On Wednesday, I bake bammy and on Thursday deliver it to supermarkets. On Saturday I go to market and on Sunday I go to church. At 11:00 p.m. I go to bed. I sell peanut and vegetables to higglers at the farm-gate, and bammy to supermarkets." [Jamaican woman farmer, 53 years old, 4 children, 6 members in HH]

# 1. INTRODUCTION

This document summarizes the principal findings, conclusions, and recommendations derived from national studies undertaken in the Caribbean as part of the IICA/IDB (Inter-American Development Bank) Program for the Analysis of Agricultural Policies vis-à-vis Women Food Producers in the Andean Region, the Southern Cone and the Caribbean.

The Caribbean countries participating in this program were Barbados, Guyana, Jamaica, and Suriname. The result, therefore, is not an overview of women food producers in the Caribbean, but rather a study of the situation in three types of Caribbean countries wherein Guyana and Suriname make up one typology, while Jamaica and Barbados each constitute a type.

The differences between these countries are significant. In both Barbados and Jamaica, tourism and the service sector represent a significant proportion of their GDP (gross domestic product) and employment (in Barbados 32% of GDP and 28% of employment in 1992, without figures on the distributive trades; in Jamaica 67% of GDP and 54% of employment in 1992). They also have significant manufacturing operations. Guyana and Suriname, on the other hand, are both characterized by large land space (Guyana is 83,000 square miles in area and Suriname is 16.4 million hectares) but small populations (717,458 in Guyana in 1993; 420,000 in Suriname in 1990), which are declining each year due to migration.

Of the four countries, Guyana is where agriculture plays the most important role, contributing, in 1993, 32% of GDP and 28% of employment. In Suriname the agriculture sector contributed 12% of the GDP in 1992; in Jamaica 7-8% between 1990 and 1993; and in Barbados 4% of the GDP in 1992. The sector provides employment for 13% of Suriname's total labor force; 23% in Jamaica; and 6% in Barbados.

Within the agricultural sector, small- and medium-sized farms play an important role in domestic agriculture and in the production of foodstuffs. The conditions facing these farmers, however, are generally difficult, though they vary between the countries studied. Barbados, because of its small size and flat topography, is the one country among the four that boasts certain amenities that make it possible for farmers to enjoy a level of cosmopolitan life while producing agricultural foodstuffs. This country, therefore, does not have a typically rural sector, but rather a suburban sector that is fully integrated into the rest of the country. On the other hand, Guyana, Jamaica, and Suriname suffer from the typical ills of uneven development. By virtue of the geography and size of the countries, sections of the population are isolated either on remote hillsides as in Jamaica, or in interior areas, as in Guyana and Suriname. Development of physical infrastructure in these rural areas lags way behind urban centers: some areas have no running water, no electricity, no roads, no telephones, and inadequate or no means of transportation.

Under structural adjustment policies, the conditions facing the rural population, particularly small- and medium-sized farmers, have worsened. Escalating cost of inputs have rendered production uneconomical. Credit for investment has become tighter and more expensive, and as borders have opened up many farmers have had to face unfair competition posed by illegal dumping of imported food on Caribbean markets. All this has negatively affected farming and increased hardship in rural areas. The response has been a gradual shift of the work force out of the sector into urban employment in sectors that exhibit greater growth, such as services.

With increased migration and the overall impact of structural adjustment on the economies of the four countries, the role women play in the agricultural sector has become increasingly important. Historically, Caribbean women have always played an important role in agricultural production —first as slaves, then under the indenture system, and finally, throughout the post-emancipation period. In modern times, many are employed on plantations and large and small farms. It is well documented that the marketing of domestic agriculture is dominated by women.

Women on small farms who are self-employed are largely an undocumented segment of the labor force, and they are largely invisible to agricultural planners. At the best of times small-and medium-sized farmers have little access to land, credit, improved and appropriate agricultural inputs and technology, extension advice, and proper physical infrastructure like good roads, water, electricity, and telephones. When the focus is placed on women, however, the problems are even more acute: Women usually have majority responsibility for the welfare of children. Women typically do not have titles to the land they farm, thereby limiting their access to formal credit. Finally, they have limited access to improved inputs or new technological advances and little access to training.

Even when faced with constraints, women farmers continue to provide food for their families and surplus for the market. Urban centers, with their own problems of high unemployment and high-density communities, are supplied with comparatively cheap sources of nutritious food by rural women. Because of the nature of the market, buyers are able to access small quantities of fresh produce at prices that are negotiable, on a daily basis, allowing the poor to stretch their limited incomes in conditions of high inflation.

In spite of the important role women play in food security, most countries do not adequately address the needs of women food producers, primarily because they have not ascertained whether there are any special needs of women within the larger needs of farmers. There is simply no data for planners to make any statement on women farmers.

The IICA/IDB project on rural women food producers addresses this paucity of information. It provides an analysis of women's role in small-farm production, processing, and marketing, and evaluates the larger policy, institutional, and program environment with a view to proposing recommendations that will support women in their continued agricultural efforts.

Numerous sources of information were relied upon during the course of the project, including published and unpublished materials, and interviews with relevant government officials, agricultural technicians, policy and planning officers, academicians, technology creators and disseminators, and credit officers of institutions that offer loans to the agricultural sector. The purpose of this information was to determine, from secondary sources, (1) what constitutes the universe of food producers in each country; (2) what resources —technical, financial, and institutional— are available to farmers, marketers, and processors, and whether women have access to these resources and utilize them; and (3) what the policy environment in each country is like with respect to agriculture in general, and rural women in particular. Census and other official sources of data were consulted to determine women's official participation rate in the economy, and to identify from this women's contribution to agricultural production.

A survey of 150 women farmers was also undertaken in each country to obtain empirical data on women's participation in agricultural production, marketing, and processing; on their reproductive and domestic roles in the household; and on their community activities. The questionnaire was administered to women known to be involved in farming, and in those regions known to produce selected staple foodstuffs and to have a high concentration of small farms. The areas surveyed and type of food production targeted is listed below.

| **Country** | **Regions surveyed** | **Types of agricultural production targeted** |
|---|---|---|
| Barbados | Municipalities of St. Michael, Christ Church, St. Peter, St. James, St. Andrew, St. George | Vegetables, sweet potato, small stock |
| Guyana | Districts of Cane Grove, Parika/Salem, Black Bush Polder, Pomeroon River, Canals Polder | Vegetables, cassava, fruit, rice |
| Jamaica | Municipalities of St. Ann, Trelawny, St. Elizabeth, Manchester, Claredon | Vegetables, cassava, yam |
| Suriname | Districts of Saramaca, Wanica River, Para, Commewijne, Boven, Suriname River, Marowijne | Vegetables, cassava, peanut |

Project staff also wished to gain a general understanding of the social structures of the Amerindian and Maroon communities and the role women play in their societies and in agricultural production. In addition to the regions surveyed in Suriname and Guyana, therefore, the project carried out individual and group interviews in the Maroon and Amerindian communities in the interior regions of Suriname and Guyana. Because in these communities, the survey technique was

not an appropriate instrument for information generation, project staff also visited plots with selected women to observe the manner in which crops are farmed.

The survey provides important indicators on women in small farm production and is intended as a complement to other sources of information. Its small size relative to the populations in the countries, as well as other restrictions in its applications, however, preclude it from being representative of the activities, problems, and potentialities of the wider universe of rural women in the countries surveyed.

Chapter 2 presents historical and contemporary descriptions and analyses of the small-farm production system in the Caribbean. A specific look at the contribution of women to the agricultural sector and the small-farm production system is undertaken in Chapter 3, and the official portrayal of women's participation in the sector is compared with a nonrigorous estimation of their actual participation. Further, using the data collected in the survey of rural women food producers, a profile of women farmers and information on the range of on-farm activities undertaken by them is presented.

Chapter 4 reviews women farmers' use of time on- and off-farm and their participation in decisions that affect their lives and those of their families. Access to credit by women farmers is explored and indications are given about their training needs, problems, and aspirations for their children. Chapter 5 takes a look, on a country by country basis, at official agricultural institutions and their policies that hold implications for rural women.

Finally, Chapter 6 presents a conclusion and a number of recommendations. The latter are presented in the form of national and regional project ideas under eight headings that serve to group the ideas in a meaningful way. These proposals were presented and discussed in a regional seminar on rural women food producers held in Jamaica in August of 1994.

## 2. THE CONTRIBUTION OF SMALL FARMERS TO FOOD PRODUCTION

Agriculture has been a primary economic activity of Caribbean countries since the days of slavery and colonialism. In all of the four countries participating in the women food producer's study, agriculture contributes significantly to GDP and employment. These countries produce chiefly for the export market, with rice (Guyana and Suriname), sugar (Jamaica and Barbados), and bananas (Suriname and Jamaica) being the primary exports. Coffee, spices, root crops, and other agricultural exports are secondary exports. In total, agriculture accounts for approximately 8% of the GDP in Barbados, Jamaica, and Suriname, and 30% in Guyana.

Within the agricultural sector, domestic agriculture also plays an important role. While with time and the implementation of structural adjustment policies there has been a decline in this activity, domestic agriculture continues to provide subsistence and a livelihood for a good percentage of the rural population, as well as raw materials and inputs for the agroprocessing and manufacturing sectors. The multiplier effects that accrue from domestic agricultural production are significant and important for sustained growth, economic diversification, the creation of jobs, and an expanding tax revenue base in the economy.

In contrast to traditional export agriculture, domestic agriculture remains by and large in the hands of small- and medium-sized farmers in rural, suburban, and interior areas of the countries. In Jamaica, domestic agriculture accounted for 64% of agriculture's share of the GDP in 1992, while in Barbados nonsugar agriculture and fishing contributed some US$19.2 million, or 5% of the real GDP in the same year. Suriname's domestic agriculture has rendered it reasonably self-sufficient in rice, vegetables, roots, and tubers, all produced on small- and medium-sized farms. In Guyana, 60% of all farms are small scale and contribute an estimated 50% to the country's domestic food consumption needs.

### *Historical Overview*

The countries that make up the Caribbean as it is known today were created by Europe to be an integral link in the creation of its economic wealth and political dominance. Portugal, Spain, France, Britain, the Netherlands, Denmark and Sweden all participated in the trade and, with the exception of Sweden, established colonies based on slave labor (Reddock 1985: 64). The Netherlands was so successful as a slave trader that "Amsterdam[,] . . . built on herring, sugar and spice, became the Wall Street of the seventeenth century" (Williams 1970: 157) and the intellectual and cultural capital of the world. Once the use of native Indian labor was outlawed in 1518, the importation of Africans began.

The triangular trade between Africa, the Caribbean, the American colonies, and Europe, which called for the capture and enslavement of Africans, the forced production of sugar, tobacco, coffee, and cotton on plantations and small farms, and the transformation of raw materials into processed goods in Europe, laid the foundations for Europe's industrialization and proved an efficient means of capital accumulation for Western Europe. Reddock (1985) quotes Gwendolyn Hall on this issue:

> Slave manpower has been compared to plant equipment. The purchase price of the slave was the investment, and the maintenance of the slave was a fixed cost that had to be paid whether or not the slave was working.

Slavery was abolished in the British colonies in 1833 and Williams (1970: 283) estimates that in that year there were 255,290 slaves in Jamaica (187,750 field and 31,966 domestic), 66,638 in Barbados (47,206 field and 12,511 domestic), and 69,579 in British Guiana (57,490 field and 4,871 domestic). Abolition in the Dutch colonies came in 1863, but figures for Suriname are unavailable. What is evident is that by the 1800s the institution of slavery had become inefficient, unproductive, and unprofitable.

> Production for an export market was carried out with an economy geared to subsistence production. . . . For every hundred slaves producing in the field, nearly seventeen were domestics. . . . [This,] combined with the large number of slave holders and the small number of slaves held on average by each one of them, made the slave system more like a system of household management than a commercial plantation economy. (Williams 1970: 285)

Many Africans who were brought to Suriname in the 1500s from West Africa immediately fled into the interior of Suriname and waged war against the Dutch. So successful were their efforts that whole plantations were destroyed and the former slaves joined the Africans in their fight. As a colony, Suriname, then Dutch Guiana, was nearly lost as a result of Maroon wars. Separate peace treaties were signed with some of the Maroon groups in the middle of the eighteenth century, so that for more than a century before the abolition of slavery, the Maroons had already gained their hard-fought freedom, a delineation of their territory, and a large measure of autonomy. At the present time, Maroons comprise approximately 10% of the Surinamese population and are represented by six distinct societies: Saramaka (24,000), Ndyuka (24,000), Matawi (2500), Aluka (2500), Paramakka (2500), and Kwinti (500).

Despite the obvious attempts of European colonizers to wipe out the native populations of the Caribbean, some managed to survive in the interiors of Guyana and Suriname, and in the mountains of Dominica. In Suriname an estimated 20,000 natives (incorrectly called Indiansby Columbus) are spread all over the country and are divided into two distinct groups, the upland natives (Wajana and

the Trio) and the lowland natives (Carinas or Caribs and the Lokonos or Arowaks). Descendants of the Carinas also live in Guyana.

Emancipation in the 1830s resulted in the replacement of the slave mode of production with indentureship, which meant that African labor was replaced with captives from India, Java, and China. Williams notes the following:

> Between 1838 and 1917, no fewer than 238,000 (East) Indians were introduced into British Guiana, 145,000 into Trinidad, 21,500 into Jamaica, 39,000 into Guadeloupe, [and] 34,000 into Suriname. . . . Thousands of Madeirans were introduced into British Guiana . . . as well as 14,002 Chinese between 1853 and 1879. Between 1853 and 1924 over 22,000 workers from the Netherlands Indies, principally Java, were introduced into Suriname. (1970: 348)

Although the terms of work were said to be agreed upon by the indentured persons, history shows that there was little choice in the terms, and in many cases these individuals were kidnapped and destined to become, in practice, slaves. No indentured labor was brought to Barbados.

The transformation from plantation production to wide-scale small-farm production in the Caribbean was at first gradual. In Jamaica, and to some extent in Guyana, the provision ground, perhaps the first attempt to implement the policy of "import substitution," was a feature of plantation life. Slaves were allowed to produce their own food and sell the surplus at the Sunday market, thus ensuring a reduction in the plantation's import bill and the maintenance, as well as improving the longevity of the slave. Both male and female slaves worked provision grounds and it was primarily women who sold the surplus in the market.

In the case of Jamaica, post-emancipation meant the movement of Blacks away from plantations into the hills where life could be established unfettered by the plantation system and its attendant social and political constraints. The Sunday market was already institutionalized in the British colonies, and the role of women in it is well documented (Reddock 1985 and others). The small farm was an activity that involved the entire farm family without discrimination between male and female members, unlike that which existed in the trades. Here, "women were always excluded from the more prestigious and skilled jobs (on the plantation), including, for example, work with boilers, carpentry and masonry" (Reddock 1985: 65).

For the so-called indentured workers, the conclusion of the contract period meant provision of free passage back to their home countries or settlement, usually with a land grant. Many East Asians remained in Jamaica, Guyana, and Suriname, and in the latter country, the Dutch, after World War I, granted East Asians two hectares of land in lease to provide their own subsistence and to ensure for themselves an available supply of cheap labor.

## *Contemporary Small Farm Production Systems*

Little data exists on the ownership pattern of small farms in the four countries, though it is generally considered that ownership does not change hands at a rapid rate. It is also assumed that transfers, whether by sale, inheritance, or gift, are made within families. No evidence exists of any consolidation of small farms for greater efficiency in production and rationalization of resources, although in Jamaica 43% of all arable land is owned by less than 1% of all farmers who operate large farms. There is also little data on whether the growing proportion of small farm owners who have retained their holdings into old age have created a more favorable position for themselves by using leasing as a management tool. Research is needed in this area, as the prevailing thinking is that ownership is a necessary condition for profitable farming.

In general, agricultural land represents a declining proportion of the national wealth, and holdings of agricultural land have relatively little impact on the overall concentration of wealth in any of the nations. Yet in Barbados and Jamaica, the traditional landed gentry have been successful in consolidating their wealth and in perpetuating their positions of influence.

In the four countries participating in this project, the small farm sector (i.e., farms of less than 5 hectares) produces more than half of each country's domestic food needs. Small farmers in Guyana, using 34,000 hectares of land (11.8% of Guyana's crop land), satisfy domestic demand generated by 717,485 people. More than 80% of Jamaica's food production takes place on 477,628 hectares or 43% of the country's arable land (MINAG, Rural Physical Planning Division), operating under mixed farming systems and producing a range of over 50 domestic food crops to feed a population of 2.5 million.

In 1989, there were 170,000 hectares under cultivation in Suriname, with smallholders representing the largest number of agricultural enterprises. Approximately one-third of the total rice production is attributed to them, and virtually all plantains, root crops, vegetables, peanuts, beans and pulses, dairy and beef cattle, as well as citrus, and other fruits, are produced to feed a population of 420,000. Small farmers in Barbados in the 1950s opted to produce sugarcane in preference to food crops, and did so on 809 hectares of land, the produce of which represented 7% of national production. Beginning in the 1960s, the government encouraged the diversification of agricultural production. By the 1990s, farmers had begun to produce root crops, vegetables, and fruits for the domestic market, but not in the volume required to satisfy local demand generated by a population of 255,000 people, or to maintain any guaranteed regional or international market. In contrast, livestock production by small farmers has grown significantly over the past three decades as a large number of part-time small farmers are involved in rearing livestock.

The survey of women food producers indicates that the majority of farms are 2 hectares or smaller, or 5 acres or less (see Table II.1). Average farm size in

Barbados is .09 hectares, with 89% operating on less than 2 hectares. Eighty percent of the farms in Jamaica are under 2 hectares in size, and only around 5% of the farms are larger than 4 hectares. The survey indicates that 59% of the farms surveyed in Guyana are under 4 hectares in size, 31% were medium-sized farms of between 4 and 10 hectares, and 10% were of 10 hectares or more. The cultivation of rice in Guyana may account for the presence of larger acreage in the sample, since rice can be profitably cultivated only with a minimum of 15 acres (approximately 6 hectares), and this is still considered a small rice farm. For Suriname, the average size of the plots included in the sample was 1.07 hectares.

The organization and characteristics of farm ownership and operation have important implications for how decisions are made about land use, land investments, and the distribution of the benefits and costs of agricultural landholdings. In Suriname, all land technically belongs to the State: an legally owned by the State. This system, whereby the State retains control of the land and only enters into contractual relationships with its citizens, is peculiar to the Dutch; it was practiced in Holland and in all of her colonies. While the administrative procedures for gaining access to available land in Suriname today are cumbersome, the practice is not considered a major constraint to agricultural development. It has, however, resulted in some squatting.

***Table II.1.***
***Holding fragmentation***

| Size of Farm (ha) | Barbados | Guyana | Jamaica | Suriname |
|---|---|---|---|---|
| Total | 101% /a | 100% | 100% | 101% /a |
| < 0.4 | 49 | 2 | 16 | 15 |
| 0.4 < 2.0 | 40 | 36 | 64 | 30 |
| 2.0 < 4.0 | 7 | 21 | 15 | 27 |
| 4.0 < 10.0 | 4 | 31 | 5 | 20 |
| 10 and over | 1 | 10 | 0 | 9 |
| Average No. of Parcels | 1 | 1 | 2 | 1 |

/a Error due to rounding.

**Source:** IICA/IDB 1993.

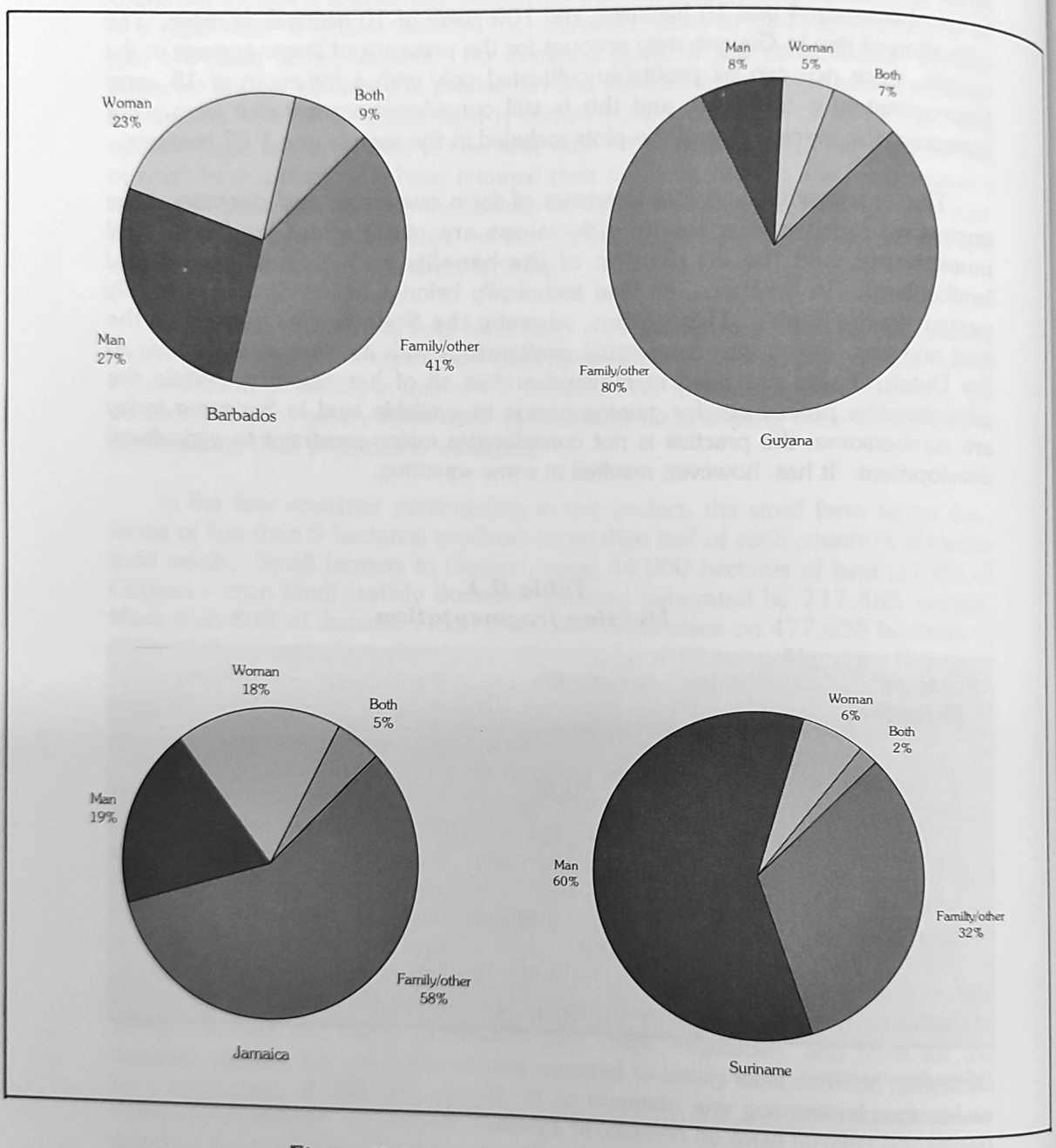



***Figure II.1. Names on the land contracts.***

Ownership rights are conferred in the form of alodial or privately owned property, long-term leases, short-term leases, preliminary rights to use the land, and concessions. After two years of leasing or renting a piece of land from the government, the leaseholder has the right to sell or rent the land to another person. Long-term leased land can be mortgaged and inherited, and leases can be sold (usually for the same price as full ownership). Short-term leases may be inherited, but the land cannot be used for collateral, except by the Peoples Credit Bank. In the interior of Suriname no land titles are granted by the government, although the Maroons and Amerindians have traditional claims over this land.

Most of the land in Jamaica is owned and operated on a freehold basis, although land is also leased or rented, and squatting on Crown lands is prevalent. Small farms normally consist of more than one plot of land, often within different tenure categories, with the freehold system being the most dominant. The system of "family land," which has its origins in Africa, is also prevalent. With respect to Jamaica, Clarke (1971: 207) refers to this concept:

> The peasant theory of land tenure, reflecting West African principles . . . [is found] in the matter of the local importance attached to joint inheritance and of what are regarded as the equal rights of all the family where family land is concerned, and its corollary that family land in not "owned" by any one member of the family but belongs to all the family, and secondly, in the traditional proscription on the alienation of family land.

Faced with the challenge of establishing families free from the dictates of slave plantation society, ex-slaves drew upon their collective memory of the organization of life in Africa, including family and community structures, culture, and patterns of land use and ownership, and developed the concept of family land that is still prevalent today in Jamaica, Barbados, Guyana, and in Suriname among the Creoles and Maroons. In this paradigm, land is passed down from one generation to another, often with only diagrams or common law titles being available to substantiate 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 subdivisions created over time to accommodate the sharing of the property by various family members.

The same conditions that prevail in Jamaica are evident in Guyana, but with the addition of the prevalence of cooperatives. As a result of the policies of the 1960s, by the 1990s some 1490 cooperatives were to be found in the records.

Land distribution in Barbados derives primarily from the plantation system developed during slavery. A tenantry system, whereby former slaves rented land and housing from plantations, was instituted after emancipation. The ex-slaves were required by law to pay rent for any plantation-owned buildings and land used. Unlike the other countries, there were virtually no other options for the ex-slaves, as planters refused to sell land to workers, Crown land was unavailable for squatting, and other arable lands attracted high prices (Beckles: 1990). While over time a few

ex-slaves were able to purchase land, the majority became leasehold users of land. Therefore, no real independent peasantry developed in Barbados as in other Caribbean territories.

The government made efforts to address the issue of land distribution in the 1970s and 1980s by permitting the subdivision of agricultural land to encourage the development of a commercial small farm sector. The 1989 agricultural census reveals that small farms operate on some 16% of the arable land, or just over 3300 hectares, while privately owned plantations control 83% of agricultural land, representing approximately 18,000 hectares. Barbados has a total land area of just under 43,000 hectares.

The survey data (see Table II.2) bears out the preceding analysis, in that 51% of farms participating in the survey in Barbados are privately owned, either by the respondent, her partner, or a family member (Figure II.1). A large number of the farmers interviewed in Barbados participated in the government's rural development project of the 1980s, which transferred rented land to former tenants and contributed to the development of infrastructure and irrigation facilities. Some 30% of the farms were found to be rented or leased, and 18% operated as family land. The majority of these farms are in very close proximity to the houses of the farmers, and the most common mode of transport used to move the goods from the field is motorized —vans and cars (Figure II.2).

***Table II.2.***
***Tenure characteristics of the small farm.***

| Type of Tenure | Barbados | Guyana | Jamaica | Suriname |
|---|---|---|---|---|
| Total | 100% | 100% | 99% /a | 101% /a |
| Own | 51 | 50 | 19 | 15 |
| Rent/Lease | 30 | 35 | 38 | 71 |
| Family land | 18 | 12 | 32 | 10 |
| Other | 1 | 3 | 10 | 5 |

/a Error due to rounding.

**Source:** IICA/IDB 1993.

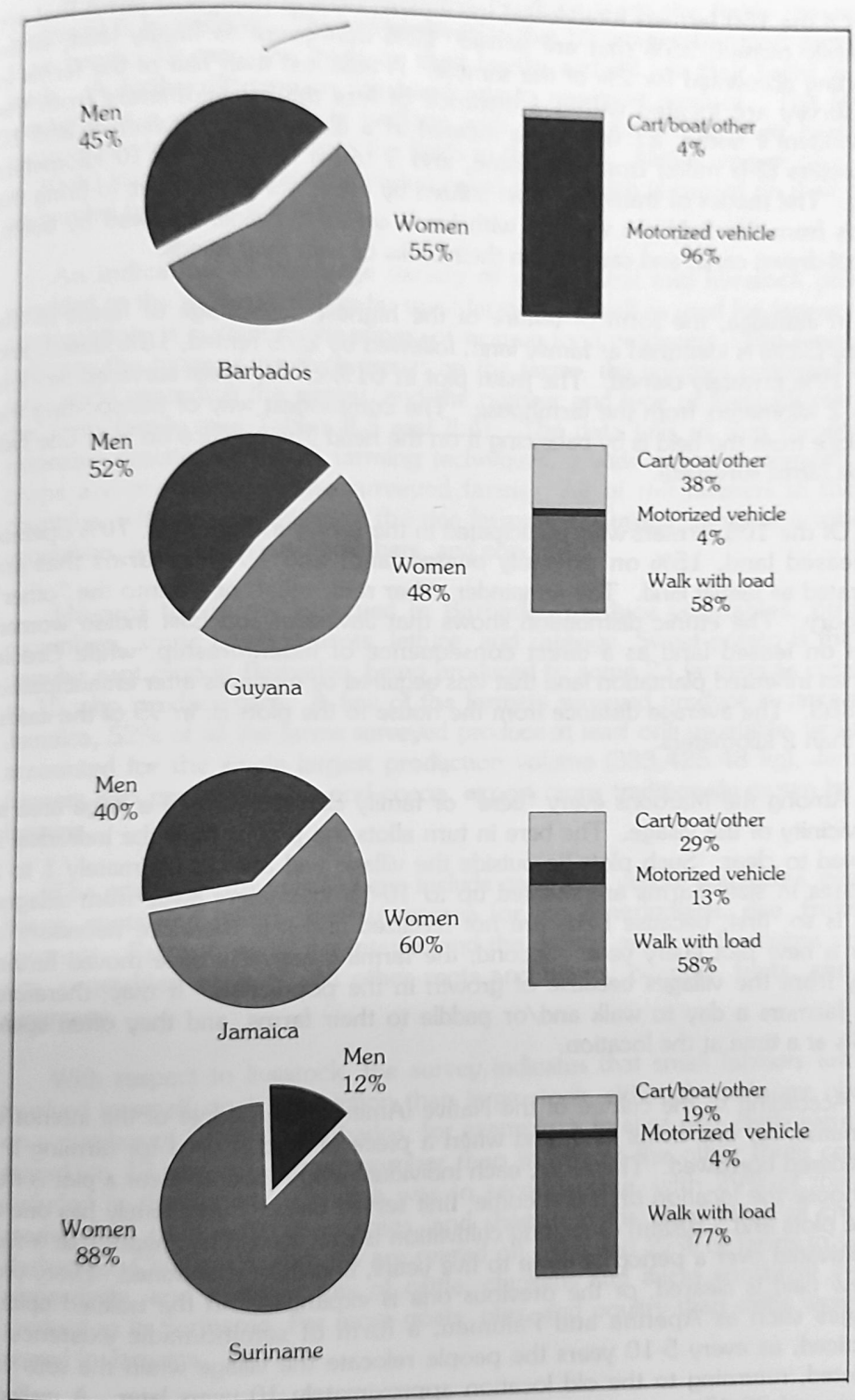



***Figure II.2. Who transports produce from the field and type of transport.***

Of the 150 farmers interviewed in Guyana, 50% of them hold farms that are privately owned, 35% that are leased, 12% that count as family land, while squatting accounted for 2% of the sample. A little less than half of the farms in the survey are located within a distance of less than 2 kilometers from the respondent's home, 21 farms are located at a distance of between 4 and 10 kilometers (2-6 miles) from the home, and 3 farms lie as far as 10 kilometers away. The modes of transport most utilized by these women farmers to bring the goods from the field are walking with loads on their heads, followed by boats, animal-drawn carts, and carrying on their backs or with their hands.

In Jamaica, the form of tenure of the highest percentage of farms in the survey (32%) is identified as family land, followed by 20% rented, 18% leased, and only 19% privately owned. The main plot in 61% of the cases surveyed lies less than 2 kilometers from the farmhouse. The commonest way of transporting the produce from the field is by balancing it on the head (the practice on over one half of the farms surveyed).

Of the 105 farmers who participated in the survey in Suriname, 70% operate on leased land, 15% on privately owned land, and 10% on farms that are indicated as family land. The remainder either rent, squat, or fall into the "other" category. The ethnic distribution shows that Javanese and East Indian women farm on leased land as a direct consequence of indentureship, while Creole women inherited plantation land that was acquired by ex-slaves after emancipation in 1863. The average distance from the house to the plots is, in 95 of the cases, less than 2 kilometers.

Among the Maroons every "bere" or family clan is allocated a large area in the vicinity of the village. The bere in turn allots the place where the individual is allowed to clear. Such plots lie outside the village and are approximately 1 to 2 hectares in size. Farms are situated up to 10-15 kilometers away from villages. This is so, first, because fields are not fertilized and it is therefore necessary to clear a new plot every year. Second, the farming activities have moved further away from the villages because of growth in the population. It may, therefore, take farmers a day to walk and/or paddle to their farms, and they often spend weeks at a time at the location.

According to the culture of the Native (Amerindian) people of the interior of Suriname, no one owns land, and when a piece of land is used for farming it is considered borrowed. Therefore, each individual who is able to clear a plot is free to choose the location on a first come, first served basis. Every family has one to three plots and a system of shifting cultivation is practiced. This means that a field is cultivated over a period of three to five years, and then abandoned. Every year a new field is cleared, or the previous one is expanded. In the isolated upland villages such as Apetina and Palumeu, a form of seminomadic existence is practiced, as every 5-10 years the people relocate the village when the soils are depleted, returning to the old location approximately 10 years later. A walking distance of 30-45 minutes to the plot is considered the limit in regard to location, while paddling distances of 1-2 hours are acceptable.

The main method of transporting produce from the fields throughout Suriname is by walking. The survey revealed that 52 women transport produce in their hands. 35 carry the loads on their heads, and 32 use their backs to carry loads. A further 26 women use handcarts to transport produce. The Maroon women use a combination of walking with loads balanced on their heads and transporting loads by boat from the fields to the village. Native women carry loads of 30-40 kilograms in a special basket called kuru, which is carried on their backs, suspended from their foreheads.

An indication of the large variety of agricultural and livestock products provided to the national market by small farmers, as well as used for farmers' own consumption, is evident in the survey of women food producers. The survey data indicates the types of produce grown on the farms, the volumes produced in the crop cycle preceding the survey, and the number and type of livestock reared by the farm family (see Tables II.3 and II.4). The data tells us that through the extensive practice of mixed farming techniques, a wide range of domestic food crops are produced on the surveyed farms. All of the farmers in the four countries, with the exception of the rice farmers in Guyana, produce a variety of vegetables, legumes, roots and tubers, and condiments.

Most of the farms surveyed in Barbados produce vegetables, primarily cucumbers, string beans, carrots, lettuce, and cabbage. Sweet potato is the most popular root crop in Barbados, being produced by some 23 farmers as compared to 10 who produce yam. A few of the farmers surveyed produce sugarcane. In Jamaica, 52% of all the farms surveyed produce at least one vegetable, while yam accounted for the single largest production volume (333,425.48 kg). Jamaican farmers also produce coffee and cocoa, export crops traditionally grown by small farmers.

The principal crops for Guyana include green and yellow vegetables, peas and beans, roots and tubers, mainly cassava for the Amerindians, rice, fruits, and coconuts. Farms both in the interior and the coastal areas of Suriname produce rice, vegetables, cassava and other roots and tubers, peanuts, fruits, and some sugarcane.

With respect to livestock, the survey indicates that small farmers are more involved in small stock production than large stock, although cattle are observed on a number of farms. In Barbados, for example, a total of 601 cattle were being reared on 17 farms, a larger number than in any of the other three countries included in the survey. Guyana was in second place, with 29% of the farms rearing 237 cattle. Chickens, pigs, and sheep are the small stock of choice in Barbados. Chickens and ducks are reared on 56% and 22% of farms in Guyana respectively, and a similar mix of cattle, chickens and ducks constitute livestock production in Suriname. Far more goats, pigs, and poultry than cattle were being reared in Jamaica.

*Table II.3.*
*Number of farms and number of livestock by type of livestock.*

| Type of Livestock | Barbados | | Guyana | | Jamaica | | Suriname | |
|---|---|---|---|---|---|---|---|---|
| | No. of Farms | No. of Animals | No. of Farms | No. of Animals | No. of Farms | No. of Animals | No. of Farms | No. of Animals |
| Cattle | 17 | 601 | 44 | 237 | 38 | 89 | 25 | 153 |
| Chickens | 43 | 57 277 | 84 | 3 347 | 21 | 744 | 34 | 539 |
| Ducks | 5 | 123 | 33 | 670 | - | - | 9 | 129 |
| Turkeys | 8 | 135 | 2 | 8 | 1 | 2 | - | - |
| Pigs | 43 | 1 674 | 3 | 16 | 79 | 190 | 1 | 2 |
| Goats | 4 | 18 | 7 | 27 | 54 | 223 | 2 | 11 |
| Sheep | 20 | 262 | 8 | 40 | 6 | 19 | 3 | 12 |
| Rabbits | 6 | 191 | 1 | 3 | 1 | 25 | - | - |
| Other | - | - | 3 | 6 | 2 | 2 | - | - |

**Source:** IICA/IDB 1993.

## 3. THE CONTRIBUTION OF WOMEN TO THE AGRICULTURAL SECTOR AND THE SMALL-FARM PRODUCTION SYSTEM

Rural women in the Caribbean have always participated in agricultural production —as slaves, under the indenture system, and throughout the post-emancipation period.

> Among slaves the housewife did not exist. From the age of four, slave girls as well as boys worked on the estate. . . . The majority of women in Jamaica between the ages of 19 and 54 worked in the fields. By the late eighteenth and early nineteenth century, women outnumbered men in the fields because of their lower mortality rates. (Reddock 1985: 64)

Amerindian, African, Creole, East Indian, Javanese, and to a lesser extent, Chinese women, have historically played a part in Caribbean agricultural development, first because they were forced to do so, second in order to survive, and third by choice. While women's involvement in the agricultural sector has been decreasing over the years in line with decreases in the farming population in the Caribbean, their contribution to production remains considerable. In contrast, in Latin American countries the phrase "feminization of agricultural production" is used to describe the agrarian culture that is, and has historically been, male-dominated, but is rapidly becoming female-dominated as women move out of their homes, and into agriculture.

### *Women's Participation in the Agricultural Sector*

Women in Caribbean agriculture are engaged in a wide range of occupations, including laborers, higglers, hawkers and traders, extension workers, farmers, food processors, agronomists, economists, technicians, and administrators. Many women are employed as full-time, part-time, or occasional laborers on plantations and large and small farms, and it is well documented that the marketing of domestic agricultural produce is dominated by women.

While women tend to perform myriad activities in the agricultural sector, including planting, harvesting, animal husbandry, and general farm management, there is nevertheless some level of sex-role differentiation in the sector. For example, forking the ground, plowing, spraying the crops, and butchering livestock are regarded as "male" tasks, while sowing seeds, reaping some crops, weeding, and watering are considered "female" tasks, although men also participate in these. Women also perform the lion's share of postharvest activities, such as washing, grading, and processing of products. In Jamaica, the majority of workers employed in the coffee and banana industry are women, and their activities are predominantly picking (coffee), grading, separating, and washing the produce. Men in the banana industry are employed to harvest fruit, transport

it to packing houses, and perform the more highly paid tasks of packaging and preparing fruit for export.

More men than women are involved in large livestock rearing such as cows, with women assisting by collecting fodder. Women tend to work with small stock, including poultry and rabbits, and are hired in large numbers to work in poultry processing plants.

In Barbados and Jamaica, the expansion of the service sector, particularly tourism, has attracted women away from agriculture and into what is considered to be more lucrative and higher status employment. According to official statistics, the number of women in agriculture in Barbados declined from 11,400 in 1946 to 9,200 in 1960. Further reductions were recorded in 1970 and 1992, when the numbers were 5,100 and 1,900 respectively. Figures supplied by the Statistical Institute of Jamaica reveal that while the agriculture, forestry and fishing sector employed 67,400 women in 1982, by 1992 the figure had dropped to 60,500.

In Guyana and Suriname, women's employment in the agricultural sector is largely confined to labor-intensive, nonprofessional activities, such as planting, maintaining nurseries, weeding, harvesting by hand, processing, and marketing. Apart from those women who are employed on both a full-time and part-time basis as hired laborers, most women's agricultural employment in Guyana is unwaged work that in the majority of cases supplements household income. Similarly, in Suriname the economic crisis of the 1980s resulted in an increase in unemployment among women and a rapid decrease in real family income. This forced more women to seek employment in the informal and traditional sector, including street vending and small-scale agricultural production.

The number of women working in agriculture, forestry, and fishing in Guyana in 1993 was put at 12,414, and the women are typically involved in manual, labor-intensive activities that are for the most part compatible with women's reproductive roles; for example, women are involved in cash crop production activities as seasonal laborers in the rice industry.

No quantitative or qualitative data on the number of working women in agriculture is available for Suriname, but it is generally assumed that most women in production activities are found in subsistence food production and in food processing. Trends since the Second World War indicate that despite a decline in the participation of women in agriculture due to the large-scale modernization of the sector, the migration of men, and increased educational opportunities in the city, women have taken over the management of farms and are becoming farm owners and managers in their own right.

In spite of women's known participation in agricultural activity, official statistics in the four countries still underestimate the number of women actually engaged in farming. Women in the Caribbean who are self-employed on family farms are, by and large, an undocumented segment of the labor force. Because their work is often viewed by statisticians, planners, and policymakers as an

## Table II.4.
## Number of farms and total production (kg) by type of crop.

| Crops | Barbados | | Guyana | | Jamaica | | Suriname | |
|---|---|---|---|---|---|---|---|---|
| | No. of Farms | Total Product. | No. of Farms | Total Product. | No. of Farms | Total Product. | No. Farms | Total Product. |
| Red Pea | 2 | 367.42 | 2 | 589.63 | 37 | 4 387.39 | 1 | 800.00 |
| Peanut | 1 | 362.88 | 1 | 408.24 | 16 | 8 226.49 | 44 | 28 245.50 |
| Carrot | 37 | 63 482.23 | - | - | 30 | 44 475.93 | - | - |
| Cabbage | 33 | 52 812.65 | 8 | 21 500.64 | 26 | 36 669.02 | 11 | 14 140.00 |
| Lettuce | 36 | 50 186.30 | - | - | 17 | 18 230.18 | - | - |
| String Bean | 47 | 35 396.68 | 3 | 2 988.77 | 7 | 1 592.14 | 5 | 3 016.00 |
| Bora | 1 | 793.80 | 47 | 118 233.11 | - | - | 29 | 38 015.00 |
| Okra | 17 | 10 482.70 | 37 | 47 503.40 | - | - | 6 | 33 150.00 |
| Tomato | 30 | 68 588.86 | 3 | 378.76 | 36 | 81 457.49 | 13 | 23 181.50 |
| Cucumber | 50 | 106 302.52 | 5 | 2 687.58 | 7 | 5 066.71 | 4 | 7 230.00 |
| Pumpkin | 19 | 18 339.05 | 16 | 27 778.46 | 7 | 20 752.20 | 6 | 4 485.00 |
| Eggplant | 2 | 2 086.56 | 10 | 9 400.86 | - | - | 21 | 23 964.00 |
| Sweet Pepper | 26 | 43 081.57 | 2 | 923.08 | 8 | 1 485.54 | 1 | 30.00 |
| Green Banana | 2 | 54 432.00 | 18 | 90 400.21 | 5 | 1 528.63 | 2 | 47 200.00 |
| Plantain | 2 | 6 713.28 | 21 | 280 898.60 | 2 | 57.15 | 17 | 65 510.00 |
| Melon | 16 | 35 063.28 | 5 | 2 691.16 | 4 | 10 727.64 | 4 | 7 950.00 |
| Corn | 7 | 3 282.70 | 3 | 2 812.32 | 19 | 4 297.41 | 4 | 9 550.00 |
| Irish Potato | 1 | 362.88 | - | - | 26 | 33 650.32 | - | - |
| Sweet Potato | 23 | 22 314.85 | 4 | 12 247.20 | 16 | 10 491.77 | 3 | 1 275.00 |
| Yam | 10 | 5 745.75 | 1 | 22.68 | 90 | 333 425.48 | - | - |
| Cassava | 11 | 7 400.48 | 57 | 304 646.83 | 27 | 73 165.68 | 49 | 87 229.00 |

Number of farms surveyed: Barbados = 146, Guyana = 150, Jamaica = 150, Suriname = 105.

**Source:** IICA/IDB 1993.

extension of their household responsibilities, and in many instances women farmers, themselves, profess to census takers that they are only housewives, there is little data on the extent of their contribution, not only to the income and livelihood of the household, but also to agricultural production and national development. Given the shift away from agriculture by the youth and the traditional agricultural labor force, those who remain in production play an even greater role.

While agricultural censuses have been carried out in all of the participating countries, none of them have focused on women farmers in their tabular presentations. The data may have been collected by gender, but the statistics on which planning for rural development or project implementation are based are

devoid of information on the work of women farmers. Examples of types of information missing include total agricultural holdings operated by women; number of holdings operated by women by mode of operation, management system, and size of holding; number of holdings operated by women working full-time and part-time; and for holdings operated by women, the number of years in farming, total area of holdings by holders' legal status, number of holders/managers with highest level of education, number with training in agriculture, number of holders by main use of product, area of holding by principal source of income. The list goes on and on.

Based on an empirical study of the four countries and a first reevaluation of the available data in each country, figures closer to the actual involvement of women in the sector were arrived at. Table II.5 displays the official and reestimated numbers of women working in agriculture for the four countries studied.

***Table II.5.***
***Reestimation of women's participation in the agricultural sector.***

| | Official portrayal | | | Reestimated |
|---|---|---|---|---|
| | Total | Men | Women | Women |
| Barbados | 4 400 | 2 500 | 1 900 | 12 581 |
| Guyana | 50 316 | 45 325 | 4 991 | 13 302 |
| Jamaica | 245 500 | 185 000 | 60 500 | 167 470 |
| Suriname | 91 977 | 49 257 | 42 720 | 52 896 |

**Sources:** Official data: Labour Force Survey 1992 (Barbados); Population Census 1980 (Guyana); Labour Force Statistics 1992 (Jamaica); Agricultural Census 1981 (Suriname).

In Barbados, the 1992 Labour Force Survey indicated that 1,900 women were employed in the agricultural sector. However, from special tabulations of the 1989 Agricultural Census we find that there were 6,714 holdings operated by women. In addition, there were 4,411 permanent paid workers, and 1,456 paid occasional female workers in the agricultural sector. Using these figures from the Agricultural Census, the number of women in the sector rises from 1,900 to 12,581. Many of these women may be part-time farmers, and the definition of employment is not the one used by the Statistical Services. Nonetheless, it is clear that these women are involved in the agricultural sector.

Guyana's 1980 census lists 4,991 women as employed in the agricultural sector. However, we find that 24,635 rural households were recorded in the 1978 Rural Farm Census. Of these, 60% were small farms of less than four hectares. If

we assume that there is at least one female in each of these small farm households, and even adjust for a small percentage where there are no women — approximately 10%— then the figure in the agricultural census jumps from the official 4,991 to 13,302.

The official number of women working in the agricultural sector in Jamaica is 60,500. However, when we look at the number of single holders —all small farmers— we find that 35,188 small farms are operated by women, and 146,981 by men. What are all the women doing who live on the male-operated farms? Assuming that women on female-run farms are included in the census tabulations, and one woman works on at least 90% of the male-operated farms, then the number of women working in the agricultural sector must be adjusted upward to 167,470. This number still leaves about 20% of the rural females in the economically active age group unaccounted for, but more than doubles the official estimate of female participation in the agricultural sector based on the census.

Finally, according to the 1981 Agricultural Census carried out by the Ministry of Agriculture of Suriname, the total number of women whose households directly derived incomes from agriculture was 42,720, compared to 49,259 in the case of men. Although the percentage of women compared to men seems high in Suriname, it should be pointed out that this represents only one half of the women living in rural areas. One quarter of the rural female population lives in the interior of the country, which is settled by Maroons and Amerindians. It is known that in these cultures all women over the age of ten engage in agricultural activities. Furthermore, there is a large number of women living on small farms in the coastal areas who also work in agriculture. Adjusting for these numbers gives us a total female participation of 52,896, or 65% of the rural female population, instead of the 42,720 (or 53%) indicated by the Agricultural Census.

### *Participation of Women in the Small Farm Unit*

According to a FAO report entitled "Women in Agricultural Development: Gender Issues in Rural Food Security in Developing Countries," African women contribute 30-80% of agricultural labour, depending on the area and economic class. In some parts of Africa, women are traditionally responsible for the provision of food crops, and men for cash crops, although the division of labor between the two activities is never clear-cut. In Asia, men in rice-growing areas traditionally perform activities such as the preparation, plowing, irrigation and leveling of fields. Women sow, transplant, and weed —activities that are typically considered women's work. Harvesting, threshing, and the transportation of grain from the fields to home is done by both men and women, while the drying, cleaning, and processing of the rice is done by women.

In the Caribbean, African Caribbean and Asian Caribbean rural households of necessity pool the labor and incomes of men, women and children as a precondition for their survival. This is so because in poor households, where the

educational achievements of the heads of household and their partners are limited, neither men nor women receive sufficient income to satisfy the needs of the household or to sustain the employment of agricultural labor. Members of the household —men, women, and children— must, therefore, engage in some economic activity, be it farming, vending, processing, craft, or wage-earning labor, in order to contribute to income generation and the household's food supply.

It is the norm on a small farm for men and women to perform various tasks on an equal basis. Men, women, and children work as needed to participate in land clearing, soil preparation, crop care, the purchase and application of fertilizers and chemicals, harvesting, and postharvest tasks. Women also carry loads of produce on their heads, backs, and in their hands from the field, and it is women who typically choose, sort, package, price, and accompany goods to market by various means of transport and remain with the goods until they are sold. Women are solely responsible for any processing activities with respect to the produce. In addition to capitalizing the farm out of profits, women's income is normally used to maintain the nutritional level of the household, provide clothing and education for their children, and maintain the family's health, either through their knowledge of medicinal plants and remedies or by saving money that can be used to obtain medical attention.

In the interior of Suriname, Maroon women are the sole producers of food, while men are expected to provide their family's protein and processed food needs (e.g., sugar and salt), clear the plot during the dry season using a machete, ax or chain saw, and possibly help to burn or remove the large tree stumps from the plot. Women are responsible for planting, tillage, harvesting and the further processing of food. Once the plot has been cleared, the debris is burnt by the woman and her children shortly before the rains begin. Among Native women, clearing of the field is also the task of the man, sometimes assisted by a group of men (mohsiro). The debris is burnt at the end of September by the man with the assistance of his wife and sons. Women are responsible for cultivating, maintaining, and harvesting the plots, assisted by older sons and daughters.

## *Profile of women food producers*

A profile of the respondents interviewed —their average age, the educational levels achieved, and their union and household head status— has important implications for the management of the farm and the design of agricultural policies and programs. Approximately 50% of the women surveyed in Guyana, 77% in Barbados, 74% in Suriname, and 62% in Jamaica were aged 40 and over. Of these, in Barbados, Jamaica, and Suriname the majority of women were over 50 years old (see Table II.6).

The age distribution of the women surveyed reflects the aging of the rural population in rural areas in many countries in the Caribbean. Migration to urban

areas and increased employment opportunities in nonagricultural sources of employment attracts rural youth, and there is no indication that today's young people are becoming farmers at any significant rate. The average number of members in the households surveyed in the four countries was six, with the exception of Barbados, where it was five.

The educational level of the women surveyed indicates a very high rate of literacy, in that virtually all women had at least primary education. In Barbados, Jamaica, and Suriname, at least 30% of the women had secondary or vocational education, compared to 11% in Guyana. The largest group of women having received tertiary education is in Barbados, where 7% had attended university.

In terms of status of the women's union with their male partner, by far the majority of women in all countries were married or in common law relationships, over two-thirds in Barbados and Jamaica, and three quarters in Guyana and Suriname. Of these, the percentage of women in common law relationships varies from 14% in Suriname to 21% in Guyana. Over 30% of the women in Barbados and Jamaica were single, divorced, widowed, or separated. In Guyana and Suriname, the corresponding figures are 20% and 14% respectively.

In Barbados, 45% of women reported that they were the heads of households; the majority of these women (34%) were single, while 28% were divorced, widowed, or separated. Approximately one quarter (23%) of the married women in Guyana considered themselves to be the heads of their households, while 42% of the common-law unions were reported to be headed by the respondent. In Jamaica, 48% of the respondents reported themselves as heads of households; this included all widows, 62% of single women, 30% of those in common-law unions, and 40% of married women. Thirty-two percent of women in Suriname responded that they were heads of households, of which over half were married. The survey sample was evenly divided between Javanese, East Indian, and Creole women, of which 73% on average were married and 13% in common-law relationships.

The data on household head in the countries studied reflects the structure of the Caribbean household. In the Caribbean, the idea of a household is not confined to the Western model of the nuclear family, that is a breadwinning husband who works outside of the home, a homemaker wife whose work is domestic and reproductive, and children. Instead, it embraces a variety of forms that invariably include extended family members. So-called single-headed households do exist where either a woman or a man is responsible for the welfare of the children and/or any other member of the unit. The "head" may also have a "visiting" relationship with someone outside of the home who contributes materially to the unit and is recognized in the statistics collected in Jamaica, alongside "common-law" and "married" as a category of relationship in the household.

*Table II.6.*
***Sociodemographic characteristics of women food producers and their households.***

| | Barbados | Guyana | Jamaica | Suriname |
|---|---|---|---|---|
| Age Distribution | 100% | 100% | 100% | 101% /a |
| <30 years | 5 | 18 | 10 | 8 |
| 30-40 | 18 | 31 | 28 | 19 |
| 40-50 | 26 | 30 | 27 | 26 |
| >50 | 51 | 21 | 35 | 48 |
| Education | 100% | 100% | 101% | 100% |
| No formal | 0 | 2 | 1 | 14 |
| Primary | 55 | 80 | 68 | 56 |
| Secondary/Vocational | 38 | 15 | 30 | 30 |
| Tertiary | 7 | 3 | 2 | 0 |
| Union Status | 100% | 100% | 100% | 100% |
| Married | 50 | 58 | 45 | 72 |
| Common-law | 16 | 21 | 17 | 14 |
| Visiting | 1 | 1 | 1 | 0 |
| Single/Widowed/ Divorced/Separated | 33 | 20 | 37 | 14 |
| Household Head | 100% | 100% | 100% | 100% |
| Woman | 45 | 40 | 55 | 33 |
| Man | 51 | 60 | 42 | 66 |
| Both | 4 | 0 | 3 | 0 |
| Average Number of Persons in Household | 4.24 | 5.23 | 5.56 | 5.23 |
| <15 years | .87 | 1.66 | 2.14 | 1.37 |
| Male | .42 | .71 | 1.09 | .66 |
| Female | .45 | .95 | 1.05 | .71 |
| 15-55 years | 2.71 | 3.28 | 2.86 | 2.98 |
| Male | 1.17 | 1.67 | 1.24 | 1.48 |
| Female | 1.53 | 1.61 | 1.62 | 1.50 |
| >55 years | .66 | .29 | .56 | .87 |
| Male | .26 | .15 | .27 | .53 |
| Female | .41 | .14 | .29 | .34 |

a/ Error due to rounding.

**Source:** IICA/IDB 1993.

Grandmothers, mothers, aunts, and others head households, and women refer to themselves as heads of households, in some instances even when they are married or in a common-law relationship. When this is the case, it is assumed that the male companion/husband is considered the head of the family. The household, then, as in the Western framework, is the domain of women, where they are in control of the care and sustenance of the family and the family

environment. The term "head of household," therefore, does not automatically refer to the male companion or husband as in the Western model, but to whomever the cohabitant considers or recognizes to be the head of the household.

In the interior of Suriname, the lives of native Surinamese women are determined by the accessibility or inaccessibility of their villages. In the first case their lives are influenced by the values and standards of western society, while in the second, life is conducted according to traditional principles. Most of the native families are nuclear —father, mother, and children— though there are also extended families that include grandmothers, grandchildren, and so on. In extended families, the married woman usually lives among her maternal allies. Mothers and daughters work closely together and the more married daughters live at home, the easier the tasks for each woman, and the greater the influence of the mother as compared to the father.

In the westernized villages, some responsibilities are shared equally. The married woman is required to perform domestic tasks such as keeping house and rearing children, and some shared responsibilities with the husband. In the upland and isolated villages, the man is the head of the household; the women are more submissive as far as decision-making and voicing their own opinions are concerned. Farming is strictly for subsistence.

The social position of Maroon Saramakan and Aucan women is roughly the same. The woman is the center of the household and the society is organized according to matrilineal relationships. In this system, descent is through the female lineage, although social life is nevertheless dominated by men. The two important social units are the matrilineage (bee) and the matriclan (lo). The matrilineage is a group of relatives who are descendants of an apical ancestress.

When a woman is married, the man is the head of the family. He is allowed to have more than one wife, and controls the legal, economic, and financial aspects of the family. Normally the man has some level of primary education. If he is well educated, the pattern is that he usually moves out of the village in search of a better paid job. Though men have to work regularly or seasonally outside of the village to earn money, nevertheless, a man may occasionally be unable to support all his wives. It was observed that many women in the Moengo area were single mothers; within the Saramakan tribe this was less the case.

## *Participation of household members in farming*

As can be seen in Table II.7, females in the household from age 15 to 55 outnumber the males in both Barbados and Jamaica, and are approximately the same in Guyana and Suriname. In these households, the majority of women indicated that their principal activities were on-Farm; very few declared their principal activity as domestic/housework. In contrast, men's principal income-generating activities were primarily off-farm in Barbados and Suriname, and on-

farm in Jamaica and Guyana. In all cases, however, the percentage of women working on the farm was higher than for men.

Compared to women, very few men were coded by women as having a secondary activity, although for those that did, it was in domestic activities or farming. Women, however, overwhelmingly coded themselves as having a secondary occupation in domestic/housework activities.

Based on this data an interesting picture begins to emerge for women to stay on the farm to run the operations while men leave either daily, seasonally or permanently (in Jamaica and Barbados, as witnessed by the relatively few numbers of men in the productive age groups) to work in other occupations or on other farms, returning to their own farm production as a second activity. This tendency appears most pronounced in Suriname and Barbados.

Whether farming is considered to be a primary or a secondary activity by any household member, this does not prevent them from participating in some stage of the production process. The women surveyed in Barbados were found to be far more involved in the three stages of production of food crops than their male counterparts, whose greatest involvement (at 3%) was in preharvest activities. (See Figure II.3)

In Barbados, the large number of farmers engaged in the rearing of animals as one of the products in their mixed farming system was surprising in comparison to the other countries. The principal animals were chickens, pigs, cattle and black belly sheep. The data indicate that activities involving the care and maintenance of these animals are largely carried out by the respondents themselves, even where men and other women reside in the household. The data on gender participation in cattle production in Barbados tends to refute the general thinking that large animals are men's domain while small animals are women's.

When the farm activities in Guyana are divided into three categories (preharvest, postharvest, and marketing), we observe the relative participation of the respondent, other women in the household, and men in these activities. The data indicate the levels of cooperation between family members at the critical stages of production, and shows that (1) men and women share preharvest tasks equally; (2) women are slightly more involved in postharvest activities than men; and (3) women market produce alongside their men.

Livestock activities seem to be divided evenly between men and women in Guyana, with men more involved in breeding and milking activities. Women's participation in the care of poultry is several times greater than that of men, particularly in regard to feeding and the maintenance of poultry houses and equipment. (See Table II.8)

All household members take part in the production of the three crops selected for analysis in Jamaica, with women participating in a range of production activities from preharvest to postharvest, including land preparation and the use of fertilizers and chemicals. On the farms surveyed, male participation was evenly

**Table II.7.**
**Principal and secondary activities of household members over 15 years old.**

| | Barbados | | Guyana | | Jamaica | | Suriname | |
|---|---|---|---|---|---|---|---|---|
| | Female | Male | Female | Male | Female | Male | Female | Male |
| Principal Activities */1 | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| On-farm | 61 | 22 | 48 | 46 | 49 | 37 | 46 | 26 |
| Off-farm | 18 | 58 | 14 | 16 | 9 | 10 | 10 | 32 |
| Student/other | 16 | 17 | 37 | 37 | 42 | 41 | 43 | 41 |
| Domestic/ Housework | 5 | 3 | 1 | 1 | — | — | 1 | 21 |
| Secondary Activities/1 | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| On-farm | 4 | 23 | 13 | 31 | 3 | 18 | 12 | 33 |
| Off-farm | 18 | 11 | 14 | 20 | 20 | 22 | 7 | 6 |
| Student/ other | 1 | 3 | 3 | 10 | 5 | 8 | 2 | 5 |
| Domestic/ Housework | 77 | 63 | 70 | 39 | 72 | 52 | 79 | 56 |

/1 Of those reporting. The women surveyed did not declare a principal activity for approximately 19% of family members over 15 years old. This climbs to approximately 66% when asked about a secondary activity.

**Source:** IICA/IDB 1993.

distributed over the three stages of production, but women's involvement in the same production processes far exceeded that of men. Of all the tasks, vegetable production was the activity for which the highest level of participation by women was recorded. Interestingly, men appear to be undertaking most of the crop care for both yams and vegetables. The figures are summarized in Table II.9.

Participation by the Jamaican women farmers surveyed in small stock production was as expected. All the respondents stated that they feed, clean and maintain animal houses and equipment and are responsible for animal health. Men take primary responsibility for the feeding and animal health of cattle.

In Suriname, women participate in almost all productive activities, from preharvest to postharvest and marketing. Women are involved in land preparation, crop care, the purchase and use of chemicals, and in harvest and postharvest activities. This applied across ethnic groups and is outlined in Table II.9. Men participate in all farm activities, with slightly more participation in postharvest activities.

The main livestock activity of the Surinamese women farmers interviewed is the production of chickens (32% of the farms), followed by the production of cattle (24% of farms) and ducks (9% of farms). The main poultry-related activities in which women are involved are feeding, the cleaning and maintenance of poultry

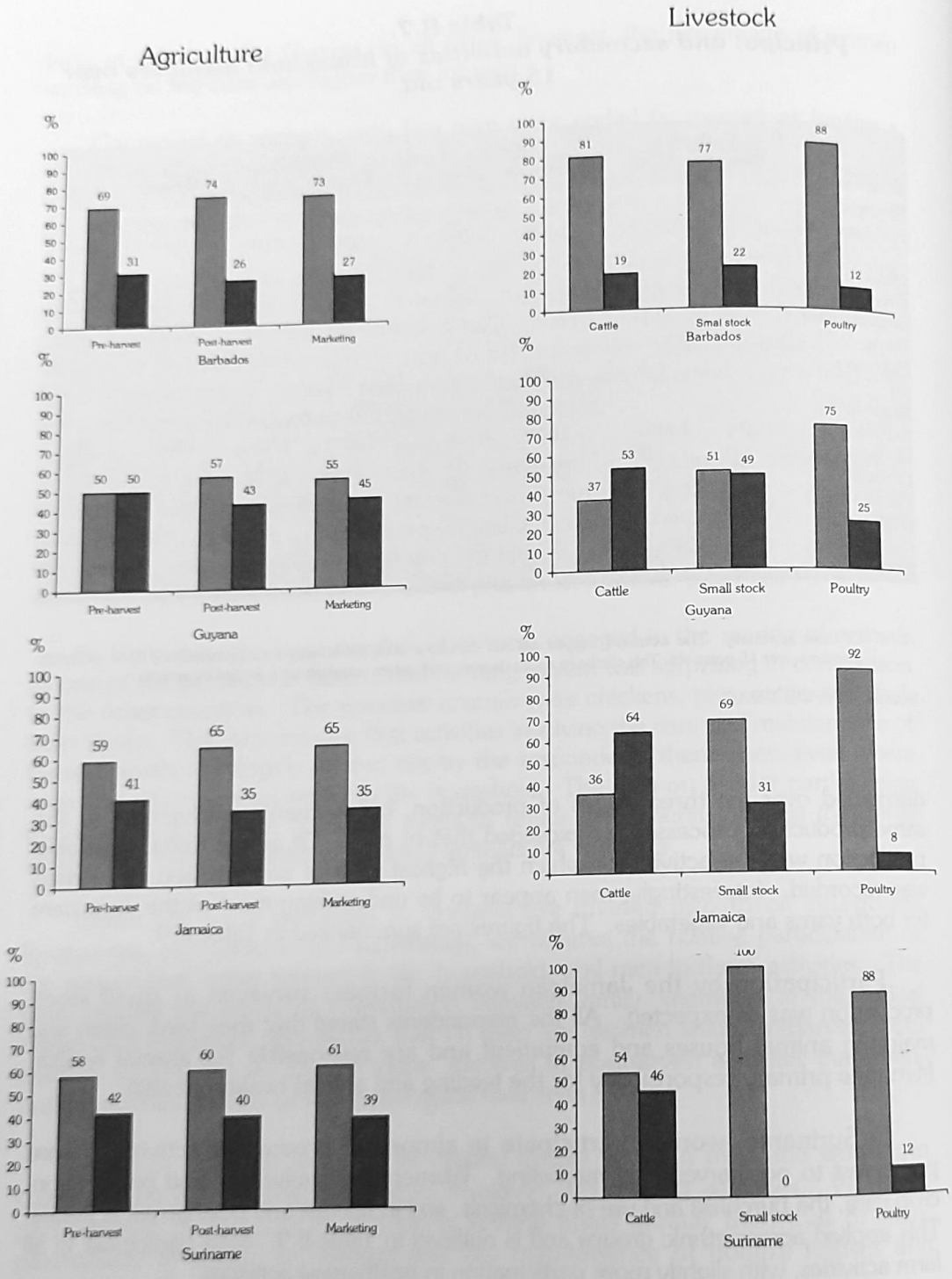



***Figure II.3. Relative gender participation in agricultural and livestock activities.***

*Table II.8.*
***Relative gender participation in livestock activities (percentages).***

| | Cattle | | | Small stock | | | Poultry | | |
|---|---|---|---|---|---|---|---|---|---|
| | Women | | Men | Women | | Men | Women | | Men |
| | Resp. | OW | | Resp. | OW | | Resp. | OW | |
| **Barbados** | | | | | | | | | |
| Feeding | 63 | 25 | 12 | 83 | 0 | 17 | 90 | 0 | 10 |
| Cleaning | 50 | 40 | 10 | 82 | 0 | 18 | 85 | 0 | 15 |
| Health | 67 | 16 | 17 | 74 | 3 | 23 | 87 | 0 | 4 |
| Breeding | 50 | 20 | 30 | 55 | 4 | 41 | 55 | 4 | 41 |
| Dressing | 57 | 29 | 14 | 6 | 25 | 8 | 85 | 8 | 7 |
| **Guyana** | | | | | | | | | |
| Feeding | 47 | 0 | 53 | 57 | 0 | 43 | 74 | 5 | 21 |
| Cleaning | 60 | 0 | 40 | 43 | 0 | 57 | 71 | 5 | 24 |
| Health | 40 | 0 | 60 | 50 | 0 | 50 | 65 | 5 | 30 |
| Breeding | 17 | 0 | 83 | 49 | 1 | 49 | 55 | 0 | 45 |
| Dressing | 35 | 0 | 65 | 50 | 0 | 50 | 60 | 0 | 40 |
| **Jamaica** | | | | | | | | | |
| Feeding | 38 | 0 | 62 | 71 | 4 | 25 | 100 | 0 | 0 |
| Cleaning | 33 | 0 | 66 | 59 | 3 | 38 | 91 | 0 | 9 |
| Health | 39 | 0 | 61 | 65 | 1 | 34 | 100 | 0 | 0 |
| Breeding | 18 | 0 | 82 | 43 | 7 | 50 | 49 | 1 | 50 |
| Dressing | 43 | 0 | 57 | 75 | 0 | 25 | 76 | 6 | 18 |
| **Suriname** | | | | | | | | | |
| Feeding | 76 | 0 | 24 | 100 | 0 | 0 | 90 | 0 | 10 |
| Cleaning | 77 | 0 | 33 | 100 | 0 | 0 | 92 | 0 | 8 |
| Health | 44 | 0 | 66 | — | — | — | 100 | 0 | 0 |
| Breeding | 36 | 0 | 64 | — | — | — | 100 | 0 | 0 |
| Dressing | 48 | 0 | 52 | — | — | — | 81 | 0 | 19 |

**Source:** IICA/IDB 1993.

Resp.: Respondent.
OW: Other women.

## *Table II.9.*
## *Relative gender participation in crop activities.*

| **Barbados** | Vegetables | | | Sweet potato | | |
|---|---|---|---|---|---|---|
| | Women | | Men | Women | | Men |
| | Resp. | OW | | Resp. | OW | |
| Purchasing/ preparation of planting material | 72 | 4 | 24 | 84 | 5 | 11 |
| Land preparation | 66 | 7 | 27 | 36 | 32 | 32 |
| Planting | 65 | 9 | 76 | 50 | 25 | 25 |
| Crop care | 44 | 9 | 47 | 44 | 23 | 33 |
| Purchase/use of fertilizer and chemicals | 58 | 13 | 29 | 50 | 17 | 33 |
| Harvesting | 60 | 14 | 26 | 48 | 25 | 27 |
| Postharvest | 60 | 14 | 26 | 46 | 23 | 31 |
| Marketing | 57 | 14 | 29 | 47 | 21 | 32 |

| **Guyana** | Vegetables | | | Cassava | | |
|---|---|---|---|---|---|---|
| | Women | | Men | Women | | Men |
| | Resp. | OW | | Resp. | OW | |
| Purchasing/ preparation of planting material | 71 | 0 | 29 | 53 | 5 | 42 |
| Land preparation | 52 | 6 | 42 | 48 | 16 | 36 |
| Planting | 53 | 6 | 41 | 49 | 14 | 37 |
| Crop care | 31 | 4 | 65 | 27 | 8 | 65 |
| Purchase/use of fertilizer and chemicals | 46 | 7 | 47 | 45 | 12 | 43 |
| Harvesting | 47 | 10 | 43 | 44 | 12 | 44 |
| Postharvest | 47 | 11 | 42 | 44 | 13 | 43 |
| Marketing | 46 | 11 | 43 | 45 | 11 | 44 |

| **Jamaica** | Vegetables | | | Yam | | |
|---|---|---|---|---|---|---|
| | Women | | Men | Women | | Men |
| | Resp. | OW | | Resp. | OW | |
| Purchasing/ Preparation of planting material | 78 | 1 | 21 | 66 | 1 | 34 |
| Land preparation | 55 | 4 | 41 | 48 | 4 | 48 |
| Planting | 58 | 4 | 38 | 62 | 34 | 4 |
| Crop care | 42 | 15 | 53 | 37 | 3 | 60 |
| Purchase/use of fertilizer and chemicals | 54 | 6 | 40 | 50 | 3 | 47 |
| Harvesting | 52 | 10 | 38 | 54 | 6 | 40 |
| Postharvest | 50 | 10 | 40 | 53 | 1 | 46 |
| Marketing | 48 | 18 | 34 | 56 | 8 | 36 |

| **Suriname** | Vegetables | | | Cassava | | |
|---|---|---|---|---|---|---|
| | Women | | Men | Women | | Men |
| | Resp. | OW | | Resp. | OW | |
| Purchasing/ preparation of planting material | 66 | 0 | 34 | 63 | 5 | 32 |
| Land preparation | 54 | 2 | 44 | 44 | 24 | 32 |
| Planting | 55 | 2 | 43 | 44 | 24 | 32 |
| Crop care | 53 | 3 | 44 | 42 | 21 | 37 |
| Purchase/use of fertilizer and chemicals | 53 | 3 | 44 | 39 | 22 | 39 |
| Harvesting | 51 | 5 | 44 | 41 | 18 | 41 |
| Postharvest | 51 | 5 | 44 | 40 | 22 | 38 |
| Marketing | 48 | 18 | 34 | 56 | 8 | 36 |

**Source:** IICA/IDB 1993.
Resp.: Respondent OW: Other women.

## *Use of Farm Production: Marketing, Food Processing, and Production Losses*

### *Marketing*

The farmers included in the survey produce over 60 varieties of foods which cover all categories —beans and peas, roots and tubers, leafy green and yellow vegetables, rice, condiments, fruits, meats, and eggs (see Tables II.3 and II.4).

In the Caribbean, and particularly among the four countries surveyed, the farms women control are small and suffer from a lack of sufficient resources, but they are not strictly subsistence households, as the majority produce a surplus for sale and/or processing. The only exception to this norm is among the groups that are isolated in the interior of Suriname, where women tend only to produce for subsistence, and if a surplus is produced it simply rots in the field.

As can be seen in Table II.10, in most cases the produce is marketed by the respondent with customers ranging from consumers to agents/middlemen. The data indicates that women not only farm the produce but also ensure its sale via one of the available outlets.

In Barbados, 88% of the women farmers report that their agricultural produce is mainly for sale, whereas the other 12% farm mainly for consumption. With regard to access to market information on prices and mechanisms for intervening in marketing processes, small-scale producers generally obtain their price information from radio programs, the BASIS report in the daily newspaper, and by telephoning current and potential customers and fellow farmers. The information gleaned from these sources serves as a base for negotiating prices, which may be adjusted either upwards or downwards, depending on the quality of produce that the farmer is offering and the general availability of the product.

From discussions with farmers, it emerged that many of them rotate their planting times. This strategy enables them to have a particular product available when the season for it is finished and the demand and price of the product is therefore higher. In general, farmers are price takers, and in the absence of a collective marketing effort by the majority of small farmers, combined with the influence of high volumes of similar commodities produced by the estates, a very competitive pricing situation is created. As a result, farmers resort to undercutting each other, sometimes selling below the cost of production in order to attract customers and keep the market.

Barbadian small-scale producers market their vegetables and livestock products in a variety of ways. For example, sales may be transacted at the farm gate level: a farmer may sell sweet potatoes "by the rod" to hucksters who harvest the crop themselves; or harvested produce may be picked up at the farm on the

basis of sales confirmed by telephone with middlemen (from vegetable depots, restaurants, and/or supermarket outlets). Farm-gate sales of produce to agents and middlemen predominate among female small farmers. Livestock are generally sold to long-standing customers who "engage" a particular portion of the carcass, or to a farmer's organization, which may handle the marketing of carcasses. Butchering is carried out mainly at the BADMC. In the case of poultry, live birds are generally sold at the farm gate, while processed birds are sold at both the farm gate and the retailer's outlet.

***Table II.10.***
***Gender participation in marketing, market outlet, and type of transport used to market.***

| | Barbados | Guyana | Jamaica | Suriname |
|---|---|---|---|---|
| Marketer: | 100% | 100% | 101% /a | 100% |
| Women | 84 | 61 | 80 | 50 |
| Men | 7 | 24 | 6 | 27 |
| Both | 9 | 15 | 15 | 23 |
| Market Outlet: | 100% | 101% /a | 100% | 100 |
| Consumer | 33 | 20 | 16 | 33 |
| Higgler/hawker | 11 | 13 | 68 | 2 |
| Agent/middleman | 20 | 40 | 8 | 45 |
| Processor/other | 36 | 28 | 8 | 20 |
| Type of Transport to Market: | 100% | 100% | 100% | 100% |
| Walk with load | 0 | 12 | 3 | 0 |
| Animal-drawn/handcart | 1 | 8 | 0 | 5 |
| Boat/water transport | 0 | 30 | 0 | 0 |
| Motorized vehicle | 99% | 50 | 97 | 95 |

/a Error due to rounding.

**Source:** IICA/IDB 1993.

Women are the principal marketers of nontraditional crops grown on small farms in Guyana, both at the farm gate or from retail stalls in the market. Rice, a traditional crop, was found to have the lowest participation of women as marketers. In Guyana two marketing systems move products produced by farmers: (1) a highly localized system (local direct system) where farmers sell their produce directly to neighbors and consumers in their communities and (2) a more formalized system (distant marketing system) centered largely around municipal markets in the capital, Georgetown, New Amsterdam, Linden, and Corriverton. Under the first system, the produce is either sold on small roadside stands or

bought directly from the farmer's homestead. In the second case, the farmer takes her produce to assembly points throughout the Coastal Belt and a few Riverain areas by land or water transport. Assembly points include wharves, bridges, or any suitable location readily accessible by the majority of farmers and buyers in the farming community. Most of the food crops are transported to major municipal markets where wholesaling and retailing activities are carried out.

Processors are important market outlets for Guyanese farmers, as some 20% of farms supply raw materials for processing. Approximately 20 different products are disposed of in this manner, and there is great potential for agroindustry in the country. This situation has developed since the 1970s, when Guyana's economic policy of import substitution encouraged production of a range of juices, confections, rice and cassava flour, snack foods from local produce (plantain chips, cassava chips, etc.), and others, which are consumed by the public.

Produce in Jamaica is sold either in town markets, parish markets, or the central market. These markets operate in much the same way as they have for the past three hundred years. Women carry their produce to market, in most cases by motorized vehicle, unload their goods at a stall for which they pay a fee (sometimes based on the price the goods will fetch), and invariably remain with the goods, sometimes for three days, until they are sold.

The agent/middleman is an important customer for the farmers of Barbados, Suriname, and Guyana, while the higgler is the most important intermediary in Jamaica. Other surveys have found that approximately 50% of the total number of higglers purchase their products directly from the farmer at the farm gate. The remaining 50% obtain their supplies from several other sources, including their own farms, Kingston markets, parish markets, and the Agricultural Marketing Cooperation in operation up until the 1980s.

While higglers are the dominant traders in the distribution system, there are at least two other agents representing the export and agroprocessing sectors. Unlike higglers, these agents purchase a limited range of products and insist on specified quality standards. Export agents purchase mainly tubers such as yam, potato, dasheen, plantain, pepper, and pumpkin. The agents for the agroprocessing subsector are mainly involved in organizing and purchasing their required supplies of fruits and vegetables.

In the case of Suriname, most farm products are sold as fresh produce at the central market or in the neighborhood. Sales to the agent/middleman account for almost one half (45%) of all sales, followed by sales to the consumer (33%). Processors purchase all the pineapple, and some cabbage and soya bean.

The produce of the Maroon women in the interior of Suriname is largely used for subsistence. If there are surpluses and transportation is available, the men will participate in trading activities. The commercial activities are most developed among the Aucan women who are members of the agricultural organizations A Sa Yepi and the women's group Pet Ondro. These women are,

however, in a more favorable strategic position. From their location along the east-west connection between Paramaribo, Moengo, Albina, and French Guyana, it is easier to reach regular markets and this stimulates commercial farming. Traders, including the Federation of Agrarians and Laborers (FAL) regularly collect the products. If the products are not picked up, however, the farmers have to transport their produce to Paramaribo themselves by car, which is very expensive. Since most of the women live alone, they are free to increase their production without interference. Because it is possible to trade agricultural products in French Guyana for foreign exchange, men have become increasingly involved in agricultural production. They may hire labor or marry more women to take care of the plots.

The marketing position of Saramakan women is weak because the man controls the money and does not allow the woman to maintain her own budget. He regards it as the woman's task to bear his children and take care of food. As a result, the use of money is practically alien to Saramakan women. When confronted with money, most women do not know what to do with the pieces of paper and the coins that are supposed to represent the value of their products. As a consequence, little commercial farming is done and surpluses are left in the field to rot. However, in villages with Christian missions, the attitudes of women are different and the value of money is well understood by the people.

Among the native (Amerindian) women, commercial farming takes place in a number of coastal villages, especially those along the eastern and western borders of Suriname —Apura, Christiaan Kondre, and Langaman Kondre. The villages accessible by road —Cabenda and Donderskam— also employ commercial farming techniques. The isolated upland villages farm solely for subsistence. Pomtayer is the product produced for sale in Apura, and large quantities are sold in Nickerie and Paramaribo. A number of villages deliver fish, meat and agricultural products to the local markets daily. These villages are Galibi, Matta, Powakka, Bigipoika, Washabo and Apura.

## *Food processing*

The woman farmer is the main marketing agent, either at the farm gate or in the market place, in the majority of the cases surveyed in the four countries. She is also the main producer of processed foods, primarily for household consumption rather than commercial sale. Perhaps the earliest food processors in Guyana and Suriname were Amerindian women who produced a range of by-products from cassava. Cassareep, a preservative derived from cassava and used in cooked food, is one of the most innovative processed products of the Amerindians, as its use prevents dishes cooked with meat and stored without refrigeration from spoiling. A one-pot meal can therefore be kept going for weeks by adding fresh inputs and cassareep. This process was taught to the Maroons in Suriname by the native (Amerindian) women, along with the processing of cassava flour for the preparation of bread, and cassiri, an alcoholic drink used by Amerindians in many rituals.

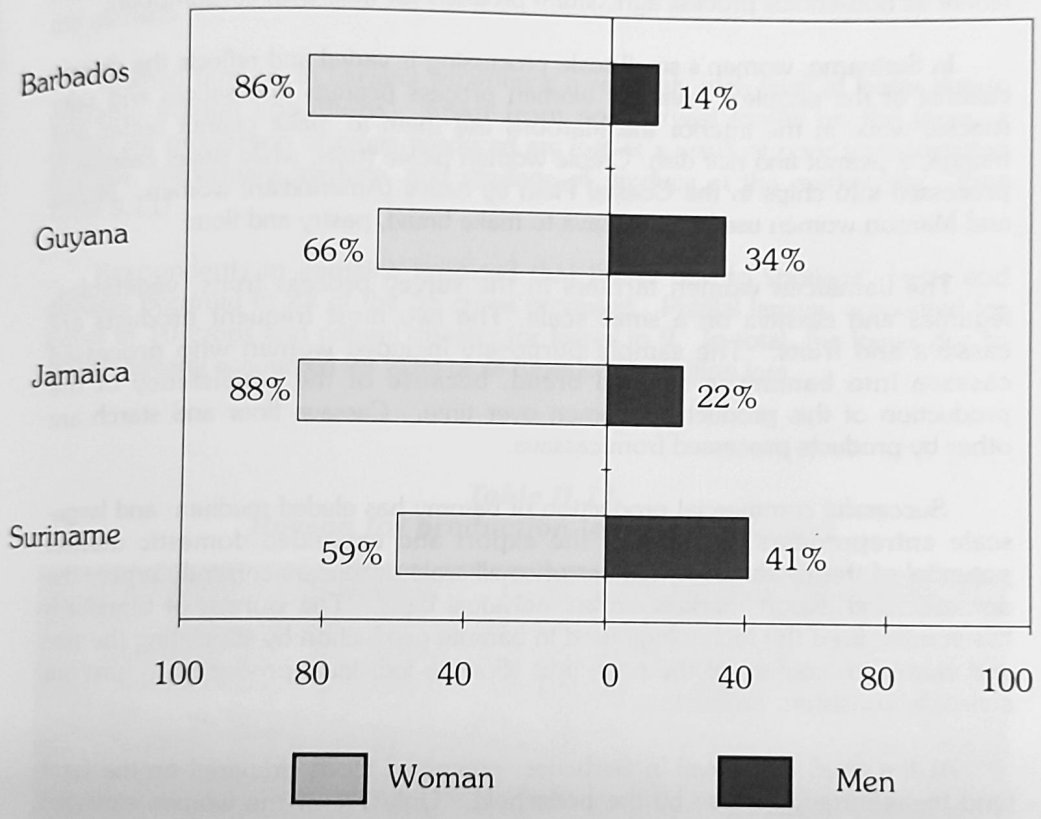



***Figure II.4. Who markets farm production.***

Guyanese women also produce dried fruits, jams, jellies, juices, salted fish and coconut oil for home consumption. Food is processed on few of the farms surveyed (11%), but those women who do process produce a large variety of products including dried coffee beans, cassava bread, cassareep, salted fish, starch, dried fruit and handicrafts.

In 100% of the cases where food is processed it is exclusively a female activity. Food is processed virtually exclusively by women on approximately 30% of the farms surveyed, with the exception of farms in the interior of Suriname, where all households process agricultural products for their own consumption.

In Suriname, women's small-scale processing is varied and reflects the diverse cultures of the people. Javanese women process peanuts into sauces and salty snacks, while in the interior the Maroons use them to make peanut butter and munga, a peanut and rice dish. Creole women pickle fruits, while sweet cassava is processed into chips in the Coastal Plain by native (Amerindian) women. Native and Maroon women use bitter cassava to make bread, pastry and flour.

The Jamaican women farmers in the survey process fruits, vegetables, legumes and cassava on a small scale. The two most frequent products are cassava and fruits. The sample purposely included women who processed cassava into bammy, a cassava bread, because of the consistency of the production of this product by women over time. Cassava flour and starch are other by-products processed from cassava.

Successful commercial production of bammy has eluded medium- and large-scale entrepreneurs, in spite of the export and expanded domestic market potential of the product. A number of small-scale producers currently supply the domestic and export markets on an individual basis. The Bureau of Standards has standardized the technology used in bammy production by stipulating the size and aluminum content of the pots, thus allowing individual producers to turn out a visually consistent product.

At the small-farm level in Barbados, processed foods prepared on the farm tend to be largely for use by the household. Only 7% of the women surveyed processed foods; no men participated in this activity on farms where this occurred.

The virtual absence of processing as a commercial activity on small farms in Barbados is a reflection of the underdevelopment of the national agroprocessing sector, the heavy reliance on imported processed foods, and the lack of awareness of the processing and commercial potential of locally available fruits, vegetables, and root crops. Thus, opportunities for the production of semiprocessed products, such as frozen vegetables and root crops, minced hot pepper, brined vegetables, solar dried products, and so on, are lost to the farmer.

### *Production losses*

What is not sold, processed, or consumed is accounted for in losses. The data indicates that spoilage and pests and disease are the two main culprits, although in all the countries farmers attributed a percentage of their losses to predial larceny. On an orange farm in Guyana, the woman farmer and her husband painstakingly painted each orange in a grove with over 30 trees with a tint of blue to enable the authorities to prosecute thieves who steal from their trees. This practice is fairly common in Guyana, where painted pineapples and other fruits are to be seen in the markets.

Women farmers in Guyana experience a relatively high level of losses due to unstable market conditions. Apart from postharvest losses on the farm, a significant proportion of crops produced are lost as a result of poor transportation facilities, inadequate markets, and spoilage of produce at the market site. (See Table II.11)

Respondents in Jamaica reported that losses due to spoilage, pests and diseases occurred in 23 of the 35 crops produced. Predial larceny accounted for losses in 10 crops and natural disaster for losses in 9. In total, the losses due to predial larceny accounted for 20% of all types of production loss.

***Table II.11.***
***Reason for production loss (percentages).***

| | Barbados | Guyana | Jamaica | Suriname |
|---|---|---|---|---|
| Reason for production loss | 100 | 100 | 100 | 100 |
| Predial larceny | 7 | 25 | 20 | 13 |
| Spoilage | 22 | 48 | 41 | 6 |
| Pests/ disease | 59 | 14 | 16 | 50 |
| Natural disaster | 2 | 1 | 13 | 25 |
| Given away/ Other | 10 | 12 | 10 | 6 |

**Source:** IICA/IDB 1993.

## *The Use of Technology on the Farm and by Women*

Judging from the socioeconomic position of women farmers in all of the countries surveyed, and given the geographical and topographical diversities of the

countries, it is reasonable to postulate that traditional and indigenous technologies, a critical factor in the production equation, have failed to produce the level of surplus necessary for economic growth and development, holding other factors constant. Many technology production centers in the region have focused on this problem, as scientists and engineers seek to devise intermediate technologies designed to address the difficult terrains of hillsides, the variety of soil types, more resistant strains of tropical diseases, and so on.

Advances in technologies have benefitted the export agriculture sector and had the greatest impact on bananas, sugarcane, coffee, rice and, most recently, on the production of yams for export. These advances have had little impact on the domestic production of other products, however, as there has been no wholesale trickle-down effect. The inability to adapt the technology puts small-scale producers in a disadvantageous position.

In the case of rice production technology, women in Guyana who were once gainfully employed in rice in large numbers, performing tasks such as land preparation, broadcasting, shying, and so on, were completely displaced with the introduction of tractors, mechanical seeders, reapers and other technology. These displaced women were absorbed by the small-farm economy, which is characterized by laborious work, few resources, and no institutional support.

While progress in technology is necessary, a central criterion is that it be appropriate and not contribute to either unemployment or underemployment. It should reduce the strenuous physical burden of work and, to be properly incorporated, the technology should be based upon the conscious choice of the users based on their identification of their needs. These considerations are particularly important with regard to women farmers.

The International Centre for Research on Women (ICRW) identified the following as reasons why women have little access to technology and other resources:

- lack of information about new technology
- cultural restraints that restrict women in dealing with male extension officers
- women's lack of control over other resources such as land, which prevents them from seeking additional resources.

The issues surrounding technology are critical to the goal of increased production, national food security and national development. If farmers, both male and female, do not have access to information about improved farming systems and the like, then production will remain at best at a rudimentary level. Further, if extension agents are not gender-sensitive, then women farmers will not be made aware of opportunities to improve their productivity, meaning that the policy encouraging provision of extension services would then have failed.

In an article entitled "Food Production, Processing and Preparation" (author unknown), it was noted that most discussions of technology for women pertain to

the postharvest phase of the food cycle. These have centered around food processing, preserving, and storage technologies. To the outsider they seem appropriate and useful, but women may accord them a low priority. Hand-operated machines such as grinders, presses, beaters and hullers for processing staple crops deserve a good deal more attention, as these technologies relieve the burden of grinding grains, tubers, and so on, physically taxing work that takes, for example, one to two hours to produce enough flour for one meal. The most important consideration, then, is that the introduction and design of any technology should incorporate the users at every stage of the process, bearing in mind the sociocultural conditions under which women live and work. Table II.12 indicates the types of technology and inputs currently used on the farms and by women in the four countries surveyed.

Among the four countries featured in this study, small farmers in Barbados are unique. The effects of projects on agricultural diversification and export marketing; research and extension by the Ministry of Agriculture and other institutions; the existence of well-established trade and distribution systems for imported agricultural inputs; and the provision of infrastructure (in terms of transport and communication networks) have facilitated islandwide access to technology, machinery and material inputs for production. These factors, together with the existence of facilities for education, health and social development, have led to the creation of a fairly well-informed small farmer, and a relatively modern agricultural sector.

Technology on small farms in Barbados is characterized by the use of traditional tools such as forks, hoes, rakes and hoses, combined with more modern technologies such as mechanized land preparation and crop establishment, trickle irrigation and mechanization. Mechanized services are purchased from government or private contractors. Small farmers also tend to be well-informed about technologies with respect to seed types and the characteristics of crop cultivars, as well as the use of commercial crop protection chemicals and fertilizers. There is a heavy dependence on chemicals for insect and weed control in vegetable production. These chemicals are usually applied using shoulder-mounted and knapsack sprayers.

Traditional hand tools for tillage and cultivation such as forks, hoes, spades and rakes are the types of agricultural equipment most commonly used. While very few small production units possess tractors and other power sources, they do have cultivation equipment in the form of ploughs, rotavators and, to a lesser extent, harrows and furrowing equipment. Equipment for fertilizer application is not predominant, with very few standard fertilizer applicators or distributors being used. Spraying equipment, particularly knapsack and hand sprayers, is used extensively and the significant number of units is a reflection of the heavy dependence on chemical weed and insect control. Irrigation system components in the form of sprinklers and drip (trickle) systems are used on holdings of all sizes. Hoses are also used extensively. In the majority of cases, women are the main users of these inputs.

## *Table II. 12. Equipment and inputs used on farm and use by gender (percentages).*

| | Barbados | | | | Guyana | | | | Jamaica | | | | Suriname | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Used on Farms | Used by Wom | Used by Men | Used by Both | Used on Farms | Used by Wom | Used by Men | Used by Both | Used on Farms | Used by Wom | Used by Men | Used by Both | Used on Farms | Used by Wom | Used by Men | Used by Both |
| **Equipment** | | | | | | | | | | | | | | | | |
| Hand tools | 100 | 67 | 2 | 31 | 100 | 20 | 5 | 75 | 100 | 52 | 5 | 43 | 100 | 30 | 2 | 68 |
| Plough | 8 | 42 | 16 | 42 | 72 | 5 | 94 | 1 | 0 | 0 | 0 | 0 | 5 | 0 | 80 | 20 |
| Cart | 3 | 80 | 0 | 20 | 14 | 0 | 81 | 19 | 1 | 0 | 0 | 100 | 20 | 19 | 5 | 76 |
| Animal power | 0 | 0 | 0 | 0 | 14 | 0 | 81 | 19 | 2 | 66 | 0 | 33 | 1 | 0 | 100 | 0 |
| Tractor | 3 | 0 | 40 | 20 | 71 | 5 | 94 | 1 | 0 | 0 | 0 | 0 | 23 | 4 | 83 | 13 |
| Irrigation equipment | 69 | 0 | 5 | 33 | 9 | 14 | 72 | 14 | 1 | 100 | 0 | 0 | 10 | 10 | 40 | 50 |
| Sprayers | 81 | 0 | 7 | 30 | 72 | 15 | 51 | 34 | 35 | 30 | 40 | 30 | 66 | 20 | 65 | 15 |
| Indigenous implements | 0 | 0 | 0 | 0 | 2 | 0 | 33 | 66 | 25 | 47 | 6 | 47 | 10 | 73 | 9 | 18 |
| **Inputs** | | | | | | | | | | | | | | | | |
| Traditional seeds | 40 | 69 | 2 | 29 | 59 | 18 | 7 | 75 | 45 | 64 | 10 | 26 | 82 | 55 | 5 | 41 |
| Improved seeds | 73 | 68 | 2 | 30 | 27 | 15 | 2 | 83 | 53 | 75 | 4 | 21 | 29 | 43 | 14 | 43 |
| Traditional pltg. material | 44 | 70 | 2 | 28 | 51 | 26 | 5 | 69 | 81 | 62 | 15 | 23 | 67 | 54 | 5 | 41 |
| Improved pltg. material | 48 | 71 | 3 | 27 | 16 | 17 | 8 | 75 | 33 | 63 | 8 | 29 | 26 | 52 | 7 | 41 |
| Inorganic fertilizer | 78 | 66 | 3 | 31 | 67 | 15 | 29 | 56 | 90 | 68 | 10 | 22 | 71 | 41 | 15 | 44 |
| Organic fertilizer | 36 | 65 | 5 | 30 | 18 | 8 | 22 | 70 | 13 | 74 | 11 | 15 | 51 | 54 | 3 | 43 |
| Insecticide | 78 | 59 | 14 | 27 | 61 | 20 | 48 | 32 | 51 | 55 | 21 | 28 | 67 | 26 | 60 | 14 |
| Fungicide | 64 | 60 | 7 | 23 | 6 | 30 | 70 | 0 | 66 | 53 | 28 | 19 | 28 | 24 | 62 | 14 |
| Weedicide | 67 | 55 | 17 | 28 | 46 | 22 | 61 | 17 | 17 | 52 | 32 | 16 | 66 | 22 | 64 | 14 |
| Animal feed | 38 | 73 | 0 | 27 | 55 | 63 | 19 | 12 | 35 | 85 | 6 | 9 | 29 | 77 | 13 | 10 |
| Vaccines | 32 | 72 | 5 | 23 | 7 | 50 | 20 | 30 | 2 | 100 | 0 | 0 | 1 | 100 | 0 | 0 |

**Source:** IICA/IDB 1993.

Wom.: Women

The participation of women in agricultural production in Guyana necessitates their use of almost all available tools, equipment and inputs. Hand tools are widely used on the farms surveyed and, in 75% of cases, by both men and women. Tractors and plows are common on farms in the Cane-Grove and Black Bush Polder districts, where farm size is relatively larger than in other districts. Men are the principal users of machinery of this kind, and its use lessens the burden of land-clearing work on women. Light agricultural equipment (e.g., mechanical diggers, planters and hand plows) is not common on small farms, though sprayers are used on 72% of the farms surveyed, mostly by men. The lesser use of sprayers by women does not necessarily mean that they are not available to them, but rather reflects their reluctance to expose themselves to chemicals.

Traditional and improved seeds are used on small-, medium-, and large-scale farms in Guyana, depending on the type of crop planted. For example, there is a tendency to use improved (certified) seeds in the cultivation of rice regardless of the size of the plot cultivated. Insecticides, fungicides and weedicides are widely used. Most farmers engaged in cash crop cultivation are aware of the availability of such inputs and the benefits as regards crop protection. These chemicals are frequently utilized in the knowledge that maximum yields, and hence the highest possible profit margins, may be obtained. The recommended dosage, methods of application, and side effects stemming from their misuse are, however, not fully understood by many farmers, mainly because of their lack of training in these areas. Inorganic fertilizers are also widely used on small farms. Similarly, there is a general tendency for farmers to use as much fertilizer as they can afford to obtain maximum yields. Organic fertilizers are less popular because of the lengthiness of the process involved.

Guyanese women use all of the inputs outlined above. They tend not to be involved in the mixing and application of chemicals used for plant protection because of ignorance, fear of detrimental effects and the lack of appropriate gear for use when applying chemicals. The survey results indicate that women use these chemicals on only 20% of the farms that use insecticides. Similarly, on farms that use weedicides and fungicides, it is men and not women who apply them in 70% and 61% of the cases respectively.

In Jamaica, the improved aspects of technology are reflected largely in the type of inputs —improved seeds, commercial fertilizers, and the full range of agricultural chemicals that are being used on farms. The traditional aspects of technology, on the other hand, are reflected in the tools and equipment, as well as the cultural practices and the farming system approaches employed. The rate of adoption of technology, however, must be linked to small producers' access to improved technology on the one hand, and to improvements in productivity on these farms on the other.

Available data and information in Jamaica show that over the last two decades a considerable amount of research has been conducted on a great variety of production problems covering almost all of the main crops and livestock produced and reared on small farms. Government research organizations, along with a

number of regional institutions, have generated a massive body of data on improved technologies for small-scale producers. However, it does not appear that this large volume of research findings is proportionately reflected in increased productivity of small farms.

Among the items of equipment and tools used by Jamaican women in small-scale production units, the survey revealed that hand tools were the most widespread. Spraying equipment ranked second (being used on 35% farms), and indigenous implements ranked third (used on 25% of farms). Less than 7% of the farms used mechanical equipment (e.g., plows, carts, animal power, tractors and mechanical diggers), a fact that may be directly related to the inapplicability of this machinery to the hillside terrain.

The majority of farms surveyed in Jamaica (90%) used commercial fertilizers and women were the main users. Sulfate of ammonia was the main fertilizer used on the farms included in the survey, and is even being used on yam, for which it is not officially recommended. It was found that insecticides, fungicides, weedicides and nematocides were all being used, ranging from a high of 66% for fungicides to a low of less than 1% for nematocides. As in the case of fertilizers, women are the main users of these chemicals. Fungicides were used least for the root crops yam, cassava and sweet potato, and this is consistent with the fact that these crops are not normally bothered by fungus during the preharvest stages.

In Suriname, most small farmers use traditional technology. The use of fertilizers and other chemicals is, however, adopted rapidly because it translates immediately into higher yields. Small farmers, especially in the interior, have hardly any access to improved technology, even when it is available to farmers on the Coast. And the availability of the technology that the Ministry of Agriculture could provide is hampered by the lack of personnel and implements in the ministry, largely due to the country's economic crises.

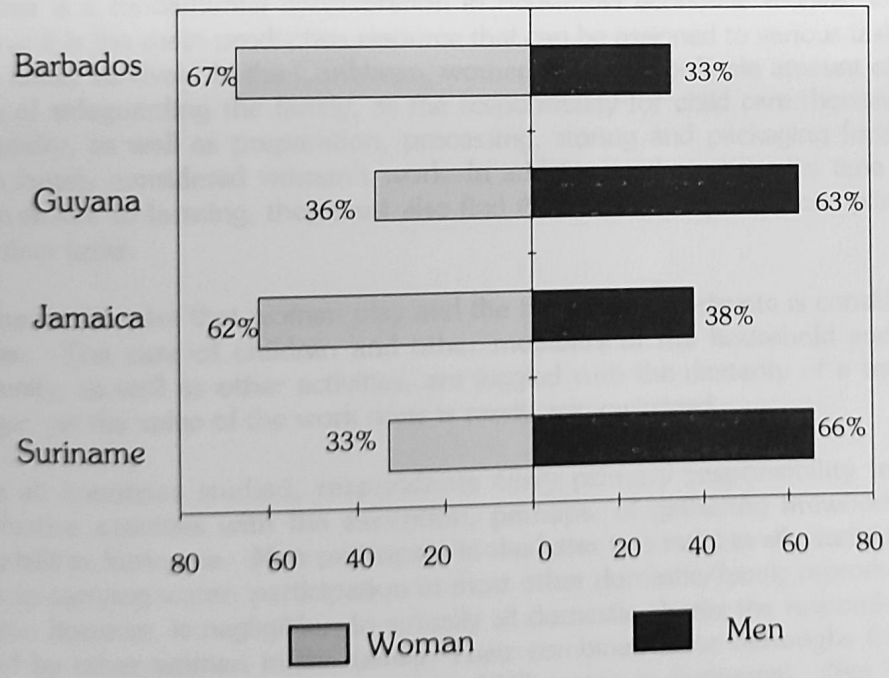
Hand tools are the most common implements used by the farmers surveyed in Suriname, and knowledge of cultivation techniques is transferred from parents to children. In the Coastal Plain there is a well-developed infrastructure for the distribution of high yielding varieties of seeds and agrochemicals. But again due to deteriorating economic conditions agricultural inputs are no longer available at reasonably accessible prices. Most of the agricultural cooperatives act as distributors of inputs to their members. These inputs are imported by the government and the prices are lower than the prices of the same inputs on the parallel market. Farmers can purchase these inputs only through the cooperatives, and most cooperatives are unwilling to admit new members in order not to increase the number of beneficiaries.

Among the Maroons of Suriname, the shifting cultivation system of farming does not allow much income to be spent on tools, equipment or inputs. The soils are mainly weathered, leached soils that belong to the order of oxisols and ultisols (United States Department of Agriculture classification). These soils have a high iron content and low fertility. Women, therefore, prefer to use creek valleys and

river terraces where the soil is more fertile. Farmland is not irrigated. Maroon farmers use only manual tools such as machetes, small knives, hoes, rakes and shovels. Improvised houses are constructed to store the produce on the farm, particularly in the case of remote farms. In the Saramakan region, the humus layer and the ashes of the burnt debris are the only form of fertilizer used. However, in the Moengo area the use of inorganic fertilizers is increasing.

Native (Amerindian) women base their choice of location for farming on the soil, drainage, vegetation, and distance. The type of forest cover depends on the age and strength of the farmer. Secondary forest is easier to clear than primary forest, but pests, weeds and diseases are less of a problem in primary forests. The tools used to farm are hoes, sticks, knives and machetes. Certain plants like orange, grapefruit, lime, and pompelmoes are bought in Paramaribo. In the villages where commercial farming is done, for instance Apura, organic fertilizers are used. A postharvest technique used for storing meat, fish, plantain and banana consists of tying these in the air in a cabin with a fire underneath, to protect them against flies and other insects.

Plagues such as fungi, grasshoppers, ants, caterpillars, wild swains and deer cause considerable damage to plants. Insecticides are too expensive to use on crops; accordingly, farmers must devise their own techniques to try to minimize damage. On one farm, for example, to minimize an ant plague, Norma, who cultivates two _-hectare plots located 2.5 kms from her home, places a number of leaves on the ant nests daily as food for them. In this way the ants do not need to go to her plot to eat.



# 4. CONDITIONS, PROBLEMS AND OPPORTUNITIES FACED BY SMALL FARMERS AND WOMEN FOOD PRODUCERS

Studies worldwide have documented the multiplicity of roles that women play in rural farm households. They have also indicated that women work longer hours than men and that the majority of tasks required to keep the family functioning are assigned to women. Discussion in Chapter 2 focused on women's role in farm production and output. This chapter highlights the corresponding reproductive and administrative/decision-making roles they play in their households. It also discusses problems the women face, including access to credit and training.

The outcome of the data collected in this area is that rural women will never be able to participate to the level of their full potential in any development project while they still have to spend six or more hours each day on domestic chores, carrying water and wood, grinding cereals and tubers, and preparing and cooking food. Attention must be given to lightening the rural woman's burden by introducing labor-saving technologies such as the use of wells and mills, and the adoption of appropriate household gadgets. In order to contribute to their full potential in farming women must also have increased access to productive resources.

## *Women's Use of Time and Participation in Decision Making*

Time is a fundamental consideration in household economic models, which posit that it is the main productive resource that can be assigned to various tasks to ensure family survival. In the Caribbean, women bear an inordinate amount of the burden of safeguarding the family, as the responsibility for child care, housework and laundry, as well as preparation, processing, storing and packaging food for sale, is largely considered women's work. In addition to the substantial time that women devote to farming, they must also find time in their days to accomplish all these other tasks.

The varied roles that women play and the time that they devote is considered as given. The care of children and other members of the household and the community, as well as other activities, are juggled with the dexterity of a trained manager, yet the value of the work done is rarely acknowledged.

In all countries studied, respondents carry primary responsibility for all reproductive activities with the exception, perhaps, of gathering firewood and paying bills in Suriname. Men participate in the latter two tasks in all countries, as well as in carrying water; participation in most other domestic/family reproductive activities, however, is negligible. In virtually all domestic chores the respondent is assisted by other women in the family. Their combined labor outweighs that of men in all categories (with the exception of bill paying in Suriname). (See Table II.13)

With regard to time dedication, women declare child care as the most time-consuming activity, taking up between 28 to 40 hours per week. Food preparation follows child care, with some 14 to 31 hours dedicated to this task.

***Table II.13.***
***Family participation in reproductive activities and time dedication by women.***

Relative participation by gender (in percentages):

| | Barbados | | | Guyana | | | Jamaica | | | Suriname | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Rsp | OW | Men | Rsp | OW | Men | Rsp | OW | Men | Rsp | OW | Men |
| Prepare food | 86% | 11% | 03% | 89% | 5% | 6% | 85% | 15% | 10% | 80% | 15% | 9% |
| Gather wood | 0 | 0 | 0 | 46 | 0 | 54 | 44 | 6 | 50 | 34 | 2 | 63 |
| Carry water | 0 | 0 | 0 | 52 | 6 | 42 | 65 | 13 | 22 | 63 | 22 | 16 |
| Tend clothes | 94 | 6 | 0 | 94 | 4 | 2 | 83 | 14 | 3 | 84 | 14 | 2 |
| Child care | 93 | 6 | 3 | 83 | 11 | 6 | 89 | 9 | 2 | 76 | 21 | 3 |
| Shopping | 91 | 5 | 5 | 91 | 1 | 9 | 86 | 7 | 7 | 61 | 4 | 35 |
| Pay bills | 73 | 4 | 22 | 58 | 1 | 41 | 75 | 3 | 24 | 40 | 3 | 56 |
| Clean house | 90 | 9 | 1 | 89 | 10 | 1 | 84 | 14 | 2 | 81 | 15 | 4 |
| Time dedication by respondents (hours per week): | | | | | | | | | | | | |
| Prepare food | 14 | | | 31 | | | 25 | | | 15 | | |
| Gather wood | 0 | | | 4 | | | 3 | | | 4 | | |
| Carry water | 0 | | | 8 | | | 5 | | | 7 | | |
| Tend clothes | 11 | | | 11 | | | 11 | | | 12 | | |
| Child care | 33 | | | 28 | | | 29 | | | 40 | | |
| Shopping | 3 | | | 4 | | | 4 | | | 3 | | |
| Pay bills | 2 | | | 2 | | | 2 | | | 2 | | |
| Clean house | 5 | | | 9 | | | 5 | | | 8 | | |

Rsp = Respondent; OW = Other women in household.

**Source:** IICA/IDB 1993.

For Guyana, food preparation is the most time-consuming of all domestic activities, taking up an average of 31 hours per week. This may perhaps be attributed to cultural requirements, as it takes East Indian and Amerindian women 2_ hours per day on average to prepare curry, roti and cassava bread. When the tasks of carrying water (which consumes 8 hrs. per week) and gathering firewood (4 hrs. per week) are also taken into account, it is clear that a considerable amount of labor-intensive work is performed by Guyanese women in their households.

As in Guyana, women in Jamaica and Suriname devote a considerable amount of time per week to gathering firewood and carrying water —an average of 8 hours per week in Jamaica and 11 hours per week in Suriname. Only in Barbados are women largely excused from these tasks. In all countries, washing and ironing clothes takes up an average of 11 hours per week.

Based on the tasks displayed in Table II.13, and assigning only a portion of the time devoted to child care as an exclusive activity because of the tendency for women to combine child care with other work, it is estimated that women spend on average some 9 hours per day in reproductive activities (6 hours per day in Barbados, 11 in Guyana, and 9 in Jamaica and Suriname). This figure does not include the time devoted to gardens and other productive farm activities.

Carrying water makes an important difference in the amount of hours women devote to domestic activities. Of the four countries studied, Barbados is the only country where a large majority of the farmers surveyed access water for farm and domestic use from public sources piped to the yard or dwelling (see Table II.14). In the other three countries, women spend between 5 to 8 hours per week carrying water for domestic purposes. As mentioned above, other family members also carry water, indicating a disproportionate dedication of family time to this task alone.

The critical importance of water cannot be underestimated either in terms of domestic reproduction or farm production. In three out of the four countries surveyed, farmers depend almost exclusively on nature —in the form of rainfall and natural water bodies such as rivers, springs, wells, and ponds— for water for farming. In addition to these, in Guyana the system of canals developed to control the ingress and egress of water from the Atlantic performs the dual role of irrigating farms and increasing the fertility of the soil.

Reliance on nature, though, with the increasing effects of global warming being experienced worldwide, is disastrous for the agricultural sector. Continued breaches in the ozone layer have resulted in rising sea levels and longer spells of dry and/or rainy seasons have made the incidence of drought and flooding unpredictable (16% of farms surveyed in Jamaica reported losses due to natural disaster). Scientists predict that these conditions will become even more critical in the future. This creates a situation of grave urgency for all the countries surveyed, but especially for Guyana, which is very flat, lies below sea level, and is protected by 150 miles of sea walls, without which the country would be subject to severe inundation.

When it comes to decision making, it is apparent from Table II.15 that women play a very important role both in productive decisions and in those decisions that affect the use of income.

In Surinamese households, in decisions regarding the overall production and administration of the farm, 42% of the decisions are made jointly; in some 40% of the cases, it is the woman who makes the decision, and in 18% it is the man alone. Decisions regarding inputs, crops to be planted, and produce to be sold are made by women in 39% of the cases, by men in 21%, and jointly in 40% of the cases. Some 14% of the men make the decisions regarding the organization of production, compared to 40% of women. The decision as to how profits are to be used is taken by 37% of the women, compared to only 10% of the men. With respect to ethnicity, the Javanese and Creole women surveyed tended to make

decisions alone, especially regarding crops to be planted, products to be sold, markets to be used, prices of goods, and hiring of farm labor. Almost all decisions among the Hindustani are shared.

***Table II.14.***
***Primary sources of farm and domestic water.***

As a percentage of farms surveyed:

| | Barbados | | Guyana | | Jamaica | | Suriname | |
|---|---|---|---|---|---|---|---|---|
| | Farm | Domestic | Farm | Domestic | Farm | Domestic | Farm | Domestic |
| Public source piped to yard | 74 | 100 | 1 | 23 | 3 | 3 | 10 | 37 |
| Private source piped to yard | 12 | - | - | 2 | - | 3 | 2 | 4 |
| Public standpipe or tank | - | - | - | 26 | 4 | 27 | - | - |
| Stored rain water | - | 7 | 82 | 5 | 26 | 3 | 57 | |
| Private catchment/ river/well/pond | 26 | - | 32 | 27 | 45 | 63 | 52 | 32 |
| Canal | - | - | 62 | 33 | - | 1 | 1 | - |
| Rainfall | 13 | - | 84 | - | 87 | - | 80 | - |

**Source:** IICA/IDB 1993.

With respect to overall decisions on the use of family income, be it for education, health, leisure, and so on, 54% of the women surveyed make these decisions alone, while 37% share the decision-making with their partners.

Around 80% of the women in the survey in Guyana indicated that they had spouses who resided on the farms with them, either in legal marriages or common-law unions. In contrast to the traditional western model, it is the woman in the household who largely makes the decision regarding the choice of livestock

***Table II.15.***
***Gender participation in productive decisions on the farm and the use of family income.***

Relative distribution per decision in percent:

| | Barbados | | | Guyana | | | Jamaica | | | Suriname | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | W | M | B | W | M | B | W | M | B | W | M | B |
| Inputs used in crop production | 63 | 6 | 31 | 30 | 30 | 41 | 65 | 6 | 30 | 37 | 29 | 33 |
| Purchase machinery & equipment | 61 | 3 | 36 | 17 | 34 | 50 | 63 | 14 | 23 | 31 | 23 | 45 |
| Crops to be planted | 64 | 4 | 32 | 30 | 16 | 54 | 72 | 3 | 25 | 41 | 19 | 40 |
| Livestock to be raised | 63 | 1 | 36 | 57 | 7 | 36 | 71 | 7 | 22 | 41 | 14 | 46 |
| Products to be sold | 64 | 3 | 34 | 38 | 14 | 48 | 82 | 1 | 17 | 40 | 16 | 44 |
| Markets to be used | 69 | 2 | 29 | 47 | 14 | 39 | 86 | 2 | 12 | 40 | 20 | 40 |
| Price of goods | 67 | 2 | 30 | 57 | 11 | 31 | 87 | 3 | 10 | 50 | 19 | 31 |
| Use of loans | 65 | 0 | 35 | 19 | 17 | 64 | 68 | 8 | 24 | 30 | 26 | 43 |
| Farm management | 66 | 1 | 33 | 32 | 19 | 50 | 60 | 2 | 29 | 37 | 13 | 49 |
| Use of profits | 65 | 1 | 33 | 30 | 7 | 63 | 74 | 2 | 24 | 37 | 10 | 53 |
| Organiz. of productive activity | 40 | 41 | 19 | 30 | 21 | 49 | 63 | 4 | 33 | 40 | 14 | 46 |
| Hiring of farm labor | 61 | 1 | 37 | 27 | 37 | 36 | 72 | 5 | 23 | 47 | 18 | 35 |
| Use of family income | 59 | 3 | 38 | 61 | 7 | 32 | 68 | 5 | 27 | 54 | 7 | 37 |

W = Women M = Men B = Both

**Source:** IICA/IDB 1993.

to rear, and the pricing and marketing location of the produce, regardless of the prevalence of men in the household. Men, on the other hand, decide on the machinery/equipment to be purchased, whether loans should be sought, and what

they should be used for. The decision as to the hiring of labor is also considered to be part of the male domain, while in 63% of the responses utilization of the profits is a shared decision. With respect to decisions on the use of family income, 61% of the women decide alone, while 32% share the decision with their partners.

The respondents in Jamaica's survey showed a high level of participation in production and management decision making on the farm, as well as in virtually all other productive decisions. Women's highest participation compared to men is in the areas relating to the marketing of produce, with 82% stating that they independently determined what products should be marketed, while 86% made the decision on market outlet and 87% determined the sale price. The areas in which they recorded the lowest level of involvement in decision making included the use of loans and the purchase of machinery and equipment. Also important is the fact that over 74% indicated that they independently decided how profits from the farming enterprises should be used.

The Barbadian woman farmer has overwhelming responsibility for the operations of the farm. She is the major decision maker in virtually all areas of farm production, deciding alone on average 60% of the cases, compared to men alone in 9% of the cases. Shared decisions account for 31% of all productive decisions. Both the woman and her man/companion decide together on many of the high-risk areas such as crop production, crops to be planted, and livestock to be raised, as well as in other areas. Men participate somewhat more in decisions regarding the organization of productive activities. In 38% of the cases both partners decide on the use of family income, while 59% of the women make this decision alone. Only four men, or 3% in the sample, are recorded as being the sole decision makers with respect to family income.

## *Farm Credit and Financing*

The difference between increased productivity and income through maximum use of available resources, and producing a small surplus for sale may be summed up in one word: credit. Small farmers need access to short-term credit to purchase inputs such as fertilizers, insecticides, improved seeds, innovative implements, and the like, under conditions that are sensitive and appropriate to their conditions, thinking, and approach.

Available information suggests that in most developing countries small farmers do not have adequate access to credit and, further, that where there is some access, the share going to women farmers is minor in relation to their role in the sector. The absence of the usual requirements of titles and other forms of collateral are blamed for this, as well as the low level of women's membership in cooperatives, a vehicle often used by donor agencies to channel "soft" money for development. Whatever the reasons, the fact remains that women small farmers are unable to realize their full productive potential.

The most widespread approach to increasing investment in farming in all the countries is to finance such investment out of the returns from production or previous sales. This is so in 95% of cases in Barbados, 80% in Guyana, 85% in Jamaica, and 92% in Suriname. Only 9% and 13% in Jamaica and Guyana, respectively, used savings to finance farm production (see Table II.16). In Jamaica, three women surveyed made use of informal arrangements, i.e., the African "partner" system, or sou sou in Barbados.

It is evident from Table II.17 that women small farmers generally do not receive loans for farm operation and investment. While the most important source for loans appears to be banks, only 17% of Guyanese farms receive loans, compared to 8% of farms in Barbados and Suriname, and 4% in Jamaica. In all countries the number of farms requesting loans from banks and other sources was considerably higher than those receiving them. Inadequate collateral, the lack of guarantors, and no registered title featured equally as the reasons for refusing loans in each of the countries and in all three categories.

With the exception of Barbados, women's participation in bank credit systems is considerably lower than men's, indicating the greater barriers that women face in accessing these formal sources of credit. Women tend to participate more than men in other sources of credit in Jamaica and Barbados; where loans were made to the farm unit from NGOs and other informal sources, these were to women. The same is not true, however, in Guyana and Suriname.

### *Women Farmer's Problems and Aspirations*

Since women food producers generally operate in the small farm sector, they could be expected to face similar problems to those experienced by small farmers in general. These would, however, be compounded by gender differences and gender relations such as women's multiple roles, the life cycle of their family, and their control over and access to resources. The problems cited by women in each of these countries reflect these gender issues, as well as the overall problems that beset the small farm sector in each country:

- For Barbados the top four problems, accounting for 55% of the responses, in order of priority are gender prejudices, labor problems, lack of financing, and lack of equipment.

- In Guyana five problems account for over 55% of the problems cited. At the top of the list is poor drainage, followed by strenuous work, which is almost equal in importance. Lack of transport, equipment and inputs round out the list of problems, each being cited with equal frequency.

*Table II.16.*
*Usual sources of farm financing.*

| | Barbados | Guyana | Jamaica | Suriname |
|---|---|---|---|---|
| TOTAL | 101% /a | 100% | 100% | 99% /a |
| Savings | 3 | 13 | 9 | 2 |
| Bank | 2 | 5 | 0 | 1 |
| Production/ previous sales | 95 | 80 | 85 | 92 |
| Informal | 0 | 0 | 2 | 1 |
| Family/other | 1 | 2 | 4 | 3 |

a/ Error due to rounding.

**Source:** IICA/IDB 1993.

*Table II.17.*
*Women's participation in credit markets.*

| | Percentage of farms that requested loans | Percentage of farms that received loans | Total | Relative participation in loan applications | | |
|---|---|---|---|---|---|---|
| | | | | Women | Men | Both |
| Barbados | | | | | | |
| Bank | 41% | 8% | 100% | 42% | 33% | 25% |
| Credit union | 0 | 0 | 100% | 0 | 0 | 0 |
| NGO | 14 | 3 | 100% | 100 | 0 | 0 |
| Informal | 0 | 0 | 100% | 0 | 0 | 0 |
| Guyana | | | | | | |
| Bank | 89 | 17 | 99% | 29 | 47 | 23 |
| Credit union | 2 | 1 | 100% | 100 | 0 | 0 |
| NGO | 2 | 1 | 100% | 0 | 100 | 0 |
| Informal | 3 | 1 | 100% | 0 | 100 | 0 |
| Jamaica | | | | | | |
| Bank | 23 | 4 | 100% | 29 | 71 | 0 |
| Credit union | 10 | 0 | 100% | 67 | 33 | 0 |
| NGO | 3 | 1 | 100% | 100 | 0 | 0 |
| Informal | 13 | 0 | 100% | 100 | 0 | 0 |
| Suriname | | | | | | |
| Bank | 48 | 8 | 100% | 20 | 80 | 0 |
| Credit union | 0 | 0 | 100% | 0 | 0 | 0 |
| NGO | 5 | 1 | 100% | 0 | 100 | 0 |
| Informal | 5 | 1 | 100% | 0 | 100 | 0 |

1/ Refers to loans in the last three years.

**Source:** IICA/IDB 1993.

- Jamaican farmers cite three problems that account for over 50% of the types and frequencies of problems cited. Labor problems, followed by lack of finance, are the two most important problems. The high cost of inputs is the third.

- Suriname has three problems that account for over half of the complaints. The unavailability of inputs is by far the most frequently cited problem. Poor drainage and natural disasters are next in order of importance.

Only Guyanese women indicated strenuous work as one of the major problems in farming. However, farming is undoubtedly strenuous for the women surveyed, particularly for those in countries where the technology available to them is very limited. This has already been alluded to above.

Previous chapters have indicated the strenuousness of the work that women undertake: in all the countries, most of the agricultural produce is brought out of the field by women and, with the exception of Barbados, it is mostly carried out on foot. In Suriname's interior, women walk great distances with the produce on their heads, and do so during pregnancy or with small children who travel on their backs, often with great detriment to their health.

The difficulties that women encounter in farming affect their desire for their own children to continue in this occupation. The majority of the respondents, 92% in Suriname and 66% in Jamaica, indicated that they wanted their sons to continue farming, compared to 58% and 42% respectively who wanted their daughters to continue farming. In Barbados 30% of the women interviewed wanted their sons to continue farming and 29% their daughters. Comparable figures in Guyana are 36% and 1%. With the exception of responses from Guyana, the most frequently cited reasons that women farmers gave for wanting their sons and daughters to continue farming was the independence (economic and otherwise) it allows them.

Over 90% of all the women farmers interviewed in Barbados, Guyana, and Jamaica responded affirmatively to the question of whether they considered farming a business. In contrast, 53% of the Surinamese said yes in answer to the question.

The women surveyed displayed a very high demand for training. In all four countries, the use of fertilizers and insecticides, and farm management (seed selection and production), were the two areas in which training was most frequently requested.

Table II.18 indicates the percentage of men and women in each of the countries who have received training by subject area, as well as the desired areas of training.

As can be seen, Barbados has a relatively higher level of training received by women as compared to the other countries, with 65% of the women having

received some training, compared to 12% in Jamaica. The difference in the percentage of women who desire training compared to those who have received it gives an indication of the level of unsatisfied demand. In total, it is approximately 3:1 in Barbados, 9:1 in Jamaica, 54:1 in Guyana, and 246:1 in Suriname.

***Table II.18.***
***Women and men who have received training and where training is desired.***

As a percentage of farms surveyed:

| | Barbados | | | Guyana | | | Jamaica | | | Suriname | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Desired | Received | | Desired | Received | | Desired | Received | | Desired | Received | |
| | Women | Women | Men | Women | Women | Men | Women | Women | Men | Women | Women | Men |
| Seed selec./ production | 18 | 8 | 5 | 21 | 0 | 0 | 21 | 3 | 3 | 34 | 0 | 1 |
| Use of fertilizers/ pesticides | 27 | 12 | 5 | 23 | 1 | 1 | 36 | 4 | 4 | 35 | 0 | 1 |
| Postharvest storage | 20 | 7 | 3 | 15 | 0 | 0 | 9 | 0 | 1 | 26 | 0 | 0 |
| Marketing | 25 | 12 | 3 | 23 | 0 | 0 | 11 | 2 | 1 | 24 | 1 | 0 |
| Feeding & grazing | 18 | 6 | 3 | 9 | 1 | 1 | 1 | 1 | 0 | 24 | 0 | 0 |
| Farm management | 27 | 12 | 3 | 31 | 1 | 1 | 11 | 1 | 1 | 31 | 0 | 0 |
| Packaging | 19 | 8 | 1 | 8 | 0 | 0 | 9 | 1 | 0 | 25 | 0 | 0 |
| Processing | 21 | 1 | 1 | 14 | 0 | 0 | 1 | 1 | 0 | 24 | 0 | 0 |

**Source:** IICA/IDB 1993.

# 5. AGRICULTURAL POLICY AND THE INSTITUTIONAL FRAMEWORK VIS-A-VIS WOMEN FOOD PRODUCERS

Determining the effect that agricultural policy does or does not have on women farmers in the four countries surveyed is one of the underlying threads of this study of rural women food producers. The contention is that despite the growing awareness by governments in most countries of the important role women farmers play in food production and in national food security, women are not taken into account in the general plan of action adopted by government for the agricultural sector.

Instead of policies that acknowledge and facilitate the contribution of women to agricultural production, small-scale projects that focus on agroprocessing, dairy farming, gardening or work generally accepted as "women's work", are substituted. Made possible by small grants and low-interest loans to governments by international agencies, these are targeted at rural women. Invariably, these projects are short-term, are outside of mainstream development projects, fail to include infrastructure components, and do not enjoy the full support of the overall policy environment. Further, it is usually the case that the women who are the presumed beneficiaries of these projects are not consulted in the identification or design of the projects, but simply subjected to their imposition.

Larger long-term projects that are more integrated into the government's policy framework tend to target export agriculture in order to ensure a continuum of foreign exchange secured through the agricultural sector. These projects generally make no specific reference to women farmers. It has been the experience, though, that large-scale projects addressing environmental concerns (e.g., the crisis in watershed areas in Jamaica, which has implications for the integrity of the tourism product), seem to recognize the confluence between the environment and the role of rural women. This may be so because the issues —the environment and women— are apical on the agendas of international agencies who control development funds.

One of the main reasons for the lack of attention paid to women farmers at the national policy level is the absence of baseline data on women's activities at the village level, outside of wage labor employment, and the failure of statisticians and planners alike to realize that, without gender-based data, policies and programs aimed at achieving the goal of integrated rural agricultural development are impossible to implement successfully. Little is known about production patterns on farms and whether there is any notable division of labor by gender; whether women farmers have special concerns and needs with regard to technology or training in adopting new crops and more productive practices; and whether available extension services are fully effective with regard to their needs. A successful plan of action for the agricultural sector, which addresses the needs of all farmers, cannot be based on information concerning one half of the farming population, while data on the other half is nonexistent or inadequate.

The agricultural policies of the four countries surveyed cover the following areas: land management, credit, technology generation and transfer, extension and training, marketing, and policies specific to rural development and rural women. In all cases the policies are devised without a gender perspective. While on the one hand women may benefit from them by virtue of their being farmers, on the other, they generally suffer from the lack of attention paid to their specific needs.

A women's bureau is functional in each country, but in all cases they seem powerless to have any sustainable impact on the lives of women generally, or rural women farmers specifically. For the most part these bureaus are understaffed, underfinanced, and are not strategically placed in a ministry that has the political clout to effect meaningful change. Further, women's issues are not taken seriously by male politicians who are usually best placed to effect change at the ministerial level.

## *Land Management Policies*

Of the four countries surveyed, only Barbados has land management policies that specifically benefit women. The Succession Act of 1975, the Property Act of 1979, and the Family Law Act of 1981 all address the legal recognition of women who are either in formal or informal relationships with men and are faced with the issues of inheritance and ownership of land. Under these laws, women and men are treated as separate persons regardless of their union status, rather than a single entity represented by the man of the family. Women are entitled to a portion of the family holdings based on their contributions as homemakers or parents in the case of death or separation of their companion. These laws reverse the discrimination that women suffered under older laws.

Another advance in Barbados has been the Tenantry Freehold Purchase Act of 1980, and the Agricultural Holdings Options to Purchase Act of 1982. Under these laws persons renting house spots or agricultural land for at least five years are given the right to purchase land from their owners. These laws have effectively ended the land tenantry system established after emancipation in 1838, whereby small house spots and agricultural land were rented from plantation owners. They have also allowed a significant number of persons, including women, access to land titles. In fact, the majority of purchasers of tenantry lots have been women.

At independence in 1966, the government of Guyana acquired virtually all lands in the country, dividing these into State lands, which are administered and leased by the government, and government lands, which may be owned absolutely and without condition. The largest majority of farmers rent or lease their land from the government, on renewable contracts of 21 years or more, or 21 years or less.

The predominant leasing system for land has led to widespread insecurity in land tenure, and has negatively influenced the willingness of farmers to invest in land, especially in improved drainage and irrigation facilities (these are vital to agricultural activities in a country where agricultural activities take place on lands that are at least seven feet below sea level). Land and property are skewed toward the man, who, as the de jure head of the family, is supposed to represent the family in business transactions, including applications for land leases and land tenure.

Land distribution in Jamaica is highly skewed and is characterized by a few large farms controlling most of the prime agricultural lands on the plains or gently sloping areas (1% of the farms control 57% of the total farm area), while the vast majority of farmers occupy small holdings on marginal hillside lands. Most of the land is owned and operated on a freehold basis, although land is also leased or rented, and squatting on Crown lands is prevalent.

Land reform policies and programs have historically played a central role in agricultural development in Jamaica, beginning as early as 1895. They have shifted between emphasizing leasehold tenancies and emphasizing freehold occupancy. Under structural adjustment there has been a large divestment of government lands. In the 1990-95 Five Year Agricultural Development Plan, priority is being given to hillside farmers in a long-term plan aimed at achieving efficiency in the use of land within a framework of sustainable development. Continuation of the Jamaica Land Titling Project begun in the 1980s is a central aspect of current policies.

In theory, Jamaican men and women have equal access to land ownership and use under the law. Similarly, land policies are not articulated with any distribution being made on the basis of gender. However, in practice there is considerable evidence of unequal access.

In Suriname less than 1% of women have title to their land. However, it should be borne in mind that the government owns 90% of the land, which is then made available for long-term lease to private users. The Legislation with Relation to Land Reform in Suriname was introduced in 1981. Its main objective is to guarantee households' access to enough land for housing, industrial and agricultural purposes. It was hoped that the act would help to reduce the skewed distribution of land in rural areas, but it failed to do so as the land tenure conditions are unfavorable for the expansion of production.

## *Credit Policy*

The economies of the four countries adhere to the capitalist system of economic organization, and credit is provided strictly along these lines. The main institutions providing credit are commercial banks, agricultural credit banks, credit unions, cooperatives, and NGOs. With the exception of cooperatives and some

NGOs, credit is available if collateral is provided, and at interest rates that closely follow market rates, with some credit available at concessional rates. Cooperatives and NGOs are able to garner funds for on-lending at concessional rates, but by and large these are limited by the number of farmers who can actually access these funds.

The major executor of credit policy in Barbados is the Barbados National Bank (BNB). The agricultural division of this bank acts as an intermediary through which the government's financial resources are disbursed. Its purpose is to ensure the agricultural sector's access to credit. However, the lion's share of the funds has gone to the sugar industry, to the detriment of the nonsugar sector, where most of the small farmers and women farmers are to be found. This has occurred in spite of the fact that the stated policy of the BNB is to make agricultural credit disbursed by the bank available on an equal basis to all agricultural activities. Other public and private institutions offer credit to the agriculture sector, but their data shows that the credit available for nonexport food production is relatively low.

Barbadian analysts suggest that women do not have the same level of access to formal sources of credit because of their nonownership of resources, including land that could be used for collateral. Also, women are reluctant to approach formal institutions, probably because they feel uncomfortable. They are anxious about taking economic risks and prefer to utilize their savings rather than credit. Even when they need credit, women tend to use informal sources to access resources. The same can be said of Guyanese women who, due to their lack of collateral (usually titles to lands located in properly irrigated and drained areas), do not have access to formal agricultural credit. More recently, however, the Institute of Private Enterprise Development (IPED) has been encouraging Guyanese women to access low-interest credit without strict collateral requirements. But, like their Caribbean counterparts, Guyanese women have always had relatively easier access to, and therefore preference for, informal sources of credit.

Jamaica's Agricultural Credit Bank (ACB) serves as a wholesale credit institution, and its major objective is to mobilize public sector financing for agricultural credit through its affiliated participating institutions, the People's Cooperative Bank, as well as commercial banks. The ACB has been restructured and strengthened to improve the range of services provided to the farming community. In order to widen the distribution channels for loans to small farmers, its credit policy has been changed to allow any qualified financial intermediary to rediscount loans to farmers, so that institutions such as credit unions are now able to access funds to on-lend to farmers.

Credit at concessional rates for the agricultural sector in Jamaica has been greatly affected by government's acceptance of the IDB's Agricultural Sector Adjustment Loan, which came into effect in 1990. The conditionalities attached to this loan led to the application of market lending rates for agricultural credit, which immediately resulted in diminished borrowing, especially among the small farm sector. Consequently, the government announced that for the 1994/95 fiscal year rebates would be granted to peg interest rates on agricultural loans at

30% for loans of up to US$50,000 for new investments, in light of the fact that nominal interest rates for loans to small farmers soared as high as 49% in April 1992. However, Jamaica's women farmers are similar to the women in the other countries, in that they do not borrow money from the formal sector in any significant numbers, but rather utilize informal means to access credit.

In Suriname, commercial banks play an important role in providing agricultural loans to farmers. While there is no gender restriction with respect to eligibility for loans, the policy of commercial banks is aimed at large farms with high-turnover commercial activities. Small farmers are more likely to get credit from the Landboubank (LLB), an agricultural credit institution established in 1972 for that purpose. Collateral requirements include titles on houses, land, machinery, and cattle, while interest rates on loans vary between 12% and 17%. The main difficulty faced by women is their inability to meet these collateral requirements.

### *Technology Generation and Transfer, and Extension and Training Policies*

Most economic development models are based on the assumption that Third World countries are buyers of technology rather than technology creators and producers. This assumption is ahistorical and is based on an assessment of the comparative stages of economic growth in the countries and the relative underdevelopment of their industrial sectors, from a Eurocentric perspective. In these models, the developed world, which is far more advanced in its industrial organization of production, is entrusted with the task of creating and providing technical progress for the industrial development of Third World user countries. The assumption depreciates the technological development of user countries, considering it primitive or at best traditional, and therefore irrelevant to the demands of modern industry.

Contemporary thinking on the subject has changed, primarily due to the failure of high-tech projects in developing countries. What was once termed primitive and traditional is now referred to as appropriate technology. The irony is that the developed world does not regard itself as responsible for creating and providing appropriate technology, so that Third World countries are either required to do so themselves, or successfully adapt the technology provided by developed countries.

The mechanization of agriculture was a catalyst for modernizing that sector in developed countries and resulted in lower prices to consumers and increased demand for products. In underdeveloped economies, mechanization in agriculture occurs primarily in the export sector where the terrain cultivated is similar to that of the developed country supplier of technology, that is, flat and relatively accessible, and where the exported products enjoy ready markets in those countries. In many cases the technology that is introduced for agricultural

production is unsuited to the sociocultural environment of the people, its appropriateness for the terrain notwithstanding, and this results in unemployment and underemployment, and resistance from the supposed users. Traditional domestic agricultural production that takes place on mountain slopes or on land away from the infrastructure development prevalent in cities, has not benefitted from mechanization.

Agricultural machinery —tractors, seeders, harvesters, and irrigation equipment— appropriate to the relatively flat geographical conditions that are found in Barbados, Guyana and Suriname, has alleviated some of the drudgery associated with small farming, particularly with regard to the planting and reaping of rice, land preparation, and the harvesting of certain crops. It is, however, inapplicable on mountain slopes upon which Jamaican small farmers historically situate their farming activities. Although research and development agencies in the Caribbean have taken up the challenge of creating technology that is appropriate for hillside cultivation, mass production of the machinery has not been undertaken to date.

Barbados and Jamaica have benefitted from the introduction of the technology of mini-set yam production, which was developed in Nigeria for the production of yellow yam. This technology increases the yields of yellow yam, facilitates easier packaging of the yam for export by standardizing its size and shape, and provides a traditional product to Caribbean and African communities in Europe and North America.

The technology of fertilizers and insecticides was made available by the "Green Revolution," and was mass-produced and distributed throughout the world by agrochemical corporations. Agrochemicals are widely used in the agriculture export industries of developing countries and the benefits of their use, particularly with regard to yields, are visible to all farmers. Small farmers who can afford to use chemicals do so, but for the majority the consistent use of chemicals is out of their financial range, particularly in countries where structural adjustment agreements have removed government subsidies from the agricultural sector. Because of the inadequacy of extension in the four countries and the lack of information provided at the point of sale with regard to the safe use of insecticides, there is no guarantee that chemicals are safely applied to growing foods, or in quantities that ensure the integrity of the environment.

In Barbados, work carried out by the Ministry of Agriculture in applied research and extension on new technologies led to the creation of production systems characterized by the use of improved varieties of seeds, mechanized operations, the establishment of drip irrigation systems, and the use of crop protection chemicals and fertilizers. A number of government projects in export agriculture provided subsidies for tractor cultivation, mechanical land preparation, and for the establishment of approved irrigation systems. The government's stated policy objective, though, is for the small farm sector to benefit from these technological advancements through a "trickle-down effect," wherein small farmers observe what is done on larger farms and plantations and apply similar

technologies to their plots. There is, however, no strategy employed by the Ministry of Agriculture, Food and Fisheries (MAFF) to monitor the extent to which this trickle-down effect occurs, or to identify any problems faced by the small farmer in adopting technologies that are employed on large farms.

With respect to gender, the MAFF, through its planners, states that the technologies offered are for "farmers," regardless of gender, and that there is no discrimination in the extension of information. The same is said with regard to training, although extension officers note that they make more contact with men than women. However, more women were reached for training through farm visits than through more formal training sessions since women generally do not attend the latter.

The first explicit policy on technology in Jamaica was the Scientific Research Council (SRC) Law in 1960, which empowered the council to "promote research on the use of indigenous raw materials, and undertake management of scientific and technological information within the public sector." The policy was supported by the establishment of a number of regional, statutory, and central government institutions. These included seven agricultural research laboratories and agricultural research stations islandwide.

An assessment of the impact of the policy and the success of the institutions was undertaken by a task force convened in 1989 to devise a five-year plan for science and technology that would be included in the National Five Year Development Plan (1990-1995). The task force identified constraints to the development and transfer of technology which included the following:

- the absence of a policy favoring indigenous technology
- the importance of training as part of technology transfer efforts
- poor science education and the consequences experienced in the labor market
- the need for a more scientific approach to implementation of applied research projects.

The aims of the science and technology policy as outlined in the five-year plan with specific reference to the agricultural sector are wide-ranging, without any specific goal-oriented strategy for the development and/or application of technology to the sector. The policies largely focus on traditional export crops, with small-scale producers benefitting only marginally because of their predominant involvement in the domestic food sector. The most explicit and far-reaching technological policy directed at small-scale producers and with some gender concern has been the replacement of the Ministry of Agriculture's Extension Service with a statutory body —the Rural Agricultural Development Authority (RADA). Its policy of offering continuous contact with farmers in the transfer of appropriate technology is achieved through group meetings, farmer's training, field days, and individual farm visits.

With respect to training, various opportunities are available in a formal environment, with agricultural extension officers being the main purveyors of on-site training. The attendance of women farmers is not known definitively, but if the multiple roles of women are considered, then it is safe to say that women farmers are underrepresented at training sessions.

The extension services division of Guyana's Ministry of Agriculture works in collaboration with other agencies to provide extension advice to farmers. Typically, this advice is geared toward male farmers with little attention given to identification of the needs of women. The National Agricultural Research Institute (NARI) is the largest technology extension effort in Guyana. To its credit, it has produced a new blast-resistant rice, developed tissue culture for selected crops, and produced pest management and weed control technology. These efforts, though, have little impact on the work done on small farms and even less on women farmers. The policy of formal training and education in agriculture recognizes the importance of this sector to Guyana's development, yet the ratio of males to females in these institutions is 4:1.

Suriname's technology policy seems nonexistent as little official attention is paid to the development and transfer of technologies with respect to the production, processing and marketing of agricultural goods. There is no relationship between research and on-farm practices and extension services. Although there is an organized extension service, it does not function adequately due to a lack of extension personnel, limited financial remuneration, lack of communications equipment and transportation, and myriad other deficiencies.

### *Marketing Policy*

With the exception of Barbados, no modern approaches are taken to the marketing of agricultural foodstuffs in the countries under review. In other words, marketing is done in much the same way as has been for the past 400 years, without successful state intervention, save the construction of "habitable" markets. The only visible changes are in the means of transportation used by sellers to bring the produce to market. Farmers and higglers/hucksters bring produce to markets and distribution points in cities and major towns from production centers throughout the country. Here the sellers, who are primarily women, often remain in public markets where they rent stalls for two to three days until the goods are sold.

The government of Barbados identified its marketing constraints as follows:

- limited domestic market
- lack of marketing outlets and organized distribution systems
- inadequate market intelligence systems and marketing facilities for vendors.

These constraints were addressed systematically in the Agricultural Development Plan (1988-93), with the most effective policies for small farmers being (1) the realization of more efficient collection centers, which have facilities for sorting, grading, and postharvest treatments, and (2) the provision of a package of marketing services through the upgrading of the BMC/BASIS service.

The latter policy makes it possible for small farmers to consult the BASIS publication and access current prices on a range of produce. Through the BMC they are also able to receive orders for their produce from agents throughout the country simply by using the telephone.

Domestic marketing policies in Guyana have previously centered on regularizing price disparities for produce by mandating the function of purchasing nontraditional crops to the Guyana Marketing Corporation (GMC). The obvious distortions caused by this policy led to its dissolution and the restoration of free market conditions where price is determined by supply and demand. Price liberalization has, however, encouraged exploitation of the farmer by middlemen and other traders where the margins between farm gate, wholesale, and retail prices indicate that returns to the farmer are minimal.

The Agricultural Marketing Corporation (AMC) was also introduced in Jamaica in 1963 for the purpose of providing a guaranteed outlet for producers, providing they accepted a guaranteed price for some goods. Its seeming ignorance of the higgler system was a factor in its demise, along with inflexibility of the guaranteed price structure, weak internal management, and accumulated financial losses, which became a drain on the government's purse. Dissolution of the AMC meant a wholesale return to the higgler system for the marketing of domestic food crops.

The AMC was succeeded by the creation of a Marketing and Credit Division in the Ministry of Agriculture and the establishment of producer marketing organizations in a number of farming communities. These are facilitated by a United States Agency for International Development (USAID) funded Agricultural Marketing Project that purports to provide market information services, marketing extension services, and produce inspection and preclearance facilities and services to farmers who are exporters.

Suriname has a long tradition of fixing maximum consumer prices for a number of basic foods. In general, prices have been set at levels favoring the short-term interest of the consumers, to the detriment of producers and local production capacity. Even under conditions with adequate and affordable supplies of inputs and well-managed government operated agricultural enterprises, Suriname's production of most agricultural commodities needs some degree of protection against artificially low world market prices. The question is whether this is to be done through market forces, resulting in higher consumer prices, or through direct government subsidy. The government has traditionally favored the latter approach.

The marketing of vegetables, cassava and peanut is in the hands of the intermediaries or the producers themselves, with no regulation of prices by the government. Conversely, government intervenes in the marketing of milk, rice, and some basic foods. All milk produced for sale is required to be delivered to the country's sole dairy plant, the Melkcentrale, but because the price policy sets the farm-gate price below the actual cost of production, a part of the output is sold illegally to consumers.

Suriname's Ministry of Agriculture, Livestock and Fisheries has overall responsibility for general policy formulation and also for the implementation of most specific policies and special projects. Some key areas of agriculture are shared with other ministries. For example, pricing policy is the domain of the Ministry of Trade and Industry; agricultural credit is shared with the Ministry of Finance; land allocation is the responsibility of the Ministry of Natural Resources; and public investment in agriculture is assigned to the Ministry of Planning and Development Cooperation.

### *Rural Development Policies, Programs and Projects*

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

Almost all rural development programs supported by the government is part of the national diversification policies that seek to reduce the mono-crop nature of the sector. They also form part of land distribution policies, in terms of both legal access to land and long lease possibilities. Although rural development projects and programs are important for women both as residents of rural communities and as farmers in their own right, their impact on women and small farmers has been varied. There is generally no reference to women in the various programs nor acknowledgment of gender differentials and the need for an awareness of these in planning and implementing projects.

RADA has had a decidedly positive impact on rural development in Jamaica. In addition to the activities outlined previously, the Social Services/Home Economic Division of RADA targets farm families and women for participation in activities complementary to the overall extension thrust. These include the following:

- training sessions for community groups covering topics such as food and nutrition, home management, consumer and population education, crops and livestock production, income-generating and decision-making skills

- assisting families with setting up home gardens and distributing seeds and printed information in home gardening

- establishment of agroprocessing projects and provision of training in agroprocessing.

The Social Services/Home Economic Division is currently receiving technical assistance from the United Nations Food and Agriculture Organization (FAO) for the training of field staff and rural women in agroprocessing techniques and the establishment of commercially viable projects for a range of processed products.

In Guyana, the two main rural development policies that are translated into programs are land settlement and cooperativization. In the former, there are 15 land settlement schemes covering a total area of over 120,000 hectares (300,000 acres). This program was designed to provide small rice farmers with land for rice cultivation. The lots were 6 hectares in size, which is a size now considered unprofitable to cultivate rice. Small farmers are reportedly informally renting their plots to larger farmers for amounts exceeding the equivalent of three months of a farm laborer's wages.

The Ministry of Cooperatives was established in 1962 to assist, train and guide community members in cooperative-type agricultural enterprises in order to minimize the disadvantages of small-scale farming. The GAIBANK was set up in 1973 to assist such cooperative enterprises financially. Cooperativism failed to live up to the expectations of government, but to date there are 1400 registered cooperatives. Very few of these are active, and it is understood that there are only seven functional cooperatives in which women play a major role.

Responsibility for rural development in Suriname until recently has straddled several ministries. Rural development now resides in the new Ministry of Regional Affairs and Decentralization. In general, rural development policies are geared toward the total development of various sectors in the rural areas such as health, housing, social services and infrastructure. Women have never been a specifically targeted group for policy. The Ministry of Agriculture, though, has a home economics section, which disseminates information on home maintenance and targets women as the main beneficiaries of this information. Very little information is given by them on field production, income-generation, and so on, and the unit suffers considerably from the lack of personnel and adequate financial allocations, transportation, and materials. The result is nonimplementation of programs and nonfunctionality of the section.

## *Existing Policies on Rural Women*

In general, government programs and policies directed specifically at women farmers are nonexistent. If projects are specified as women's projects,

they often focus on training programs in areas such as handicrafts, cookery, dress-making, and other skills traditionally associated with women.

This is the case in Barbados, where welfare-oriented programs are offered by NGOs, specifically women's groups. In spite of the traditional approaches of the programs, they have responded to women's need to upgrade their skills or acquire new skills to generate employment and income. But as far as farming is concerned, these programs do nothing to increase the efficiency of women farmers.

The Women's Affairs Bureau in Guyana is terribly understaffed, having a complement of only three full-time staff members in September 1994. The bureau is also underfinanced and has moved between no less than six ministries since its inception in 1975, thus severely limiting its effectiveness and capability to administer projects and programs.

While the Social Impact Amelioration Programme (SIMAP) of 1988 was created to ease the impact of structural adjustment on rural women and other vulnerable groups in Guyana, it has not succeeded in effecting much change in the lives of most rural women. The Futures Fund and, interestingly, projects administered by international agencies have had a similar experience in spite of their "women in development" components. Successful work with rural women farmers has been achieved by two political groups: the Women's Revolutionary Socialist Movement (now called the National Congress of Women) and the Women's Progressive Organization. The former is the women's arm of the ruling PNC, organized in 1966, and has formed women's groups throughout the country. The latter is the women's branch of the PPP, which has been in existence since the 1950s and concentrates its community efforts on the coast of Guyana.

The 1987 National Policy Statement on Women and the 1990-1995 National Five Year Development Plan for Jamaica both elaborate policies relating to women and address the particular concerns of rural women. These documents recognize the role of women in agriculture and outline the constraints they face in accessing credit, training, and land, as well as the need for support services. Yet implementation of both the policy and the plan has not been very effective due to the difficulty of obtaining real commitment from high-level civil servants to actualize the policy, and the lack of integration of the precepts of the plan into the respective sectoral plans.

Existing policies on rural women in Suriname are translated into the following projects and activities:

- A research project on the situation and contribution of women farmers in agricultural production is being executed by the Sociological Research Section and Unit of Agrarian Information and Extension Services of the Ministry of Agriculture.

IFAD is funding a project to support small farmers, assisted by the Extension Department of the Ministry of Agriculture. A prerequisite of the project is to include in the target group of 5,000 farmers a significant number of women farmers. Through this project, small farmers will have the opportunity to access agricultural inputs under a special credit program.

There are a number of activities by various NGOs in the field of agricultural production in both the interior of Suriname and the coastal plain.

## 6. CONCLUSIONS AND RECOMMENDATIONS

"Projects" was the term in vogue in the development literature of the 1970s, whether they involved income-generation, credit, skills training and upgrading, institutional strengthening, or a range of other activities. This focus on discreet activities made it easier for international agencies to grant or loan small quantities of "soft" money for analyses of women's issues during the Women's Decade beginning in 1975. This focus also made it easier for governments who had no real commitment to women's issues to be party to the implementation of women's projects. The majority of such projects were implemented by NGOs, as these agencies proved less cumbersome in their bureaucracy and tended to operate at the community level. Unfortunately, the projects implemented lacked innovation and concentrated on the skills traditionally ascribed to women —cooking, sewing, canning, crafts, and so on— or on the facilitation of microenterprise development and other income-generating schemes designed to bring women into the market economy.

By the end of the Women's Decade in 1985, a gender approach was, by and large, still absent from policy formulation and implementation. Women's issues never entered the mainstream of sectoral policy and continued to be treated as "special" projects. Therefore, the critical issues such as technological innovation in agriculture; provision of credit; and access to extension services, land, and so on, continued to be approached strictly from a male perspective, while claiming not to discriminate against women.

The research on women food producers in the four countries has highlighted a number of important issues. First, the paucity of data on women in the agricultural sector and the fact that the contribution of women is not reflected in official statistics. Second, the declining importance of agriculture as a choice for employment (and particularly full-time employment) for women. Third, the need for agricultural policymakers to adopt a gender approach to policy formulation, exhibited by consultation with women farmers in the design, formulation, and execution of policies that will affect their lives.

Fourth, as the crucial role that women play in food production has often remained unacknowledged, little attention has been paid to the development of "appropriate" technology: equipment and tools that take into account their physical build, special health considerations, multiple roles, and so on. The same is true of the provision of training and the dissemination of information via extension services that rarely reach the majority of women farmers because their multiple roles as farmers, mothers, wives, caregivers to the elderly, homemakers, and community workers are unacknowledged. Fifth, the role Caribbean women play in the marketing of food seems to be taken for granted as, with the exception of Barbados, none of the governments have made successful efforts to assist higglers/hawkers/hucksters in achieving the higher level of efficiency that is possible through this marketing network. Sixth, it is important that rural development strategies be integrated into governments' overall development

strategies, involving both men and women as equal participants in, and beneficiaries of, the process.

Women, as a subset of the universe of small farmers, operate on very small plots of land. The issue of land reform is therefore of major importance in all the countries included in the survey if effective agricultural development is to take place. The data tells us that small farmers, including women, are responsible for the majority of the country's produce consumed locally. Despite this, governments' extension policies are consistently geared toward male producers, large and small, who are involved in export crop production. This policy, it is argued, will have an adverse effect on small producers and particularly on the youth of agricultural communities who are less and less interested in farming, and instead are drawn to higher status occupations in the service sector.

The survey data brings home the fact that the small-farm family is an important unit of production and income generation, wherein upwards of 50% of the men and women living in the household spend their time engaged in on- or off-farm primary income producing activities. The numbers of women and men (on average, 30% by gender in each country) who are not engaged in income generation as their primary activity are either in school, recently completed their schooling, or are elderly. Further, where family members are not producing income as their secondary activity (on average, 80% by gender in each country), they are more than likely performing a task that is augmentative and beneficial to the welfare of the family.

While the data confirms the fact that information is passed on to women farmers inside and outside of the household by male farmers who benefit from training and extension advice, issues such as the need for authorities to adopt a holistic approach in targeting recipients of agricultural information and the recognition of women farmers' specific information and training needs, remain unaddressed. Once these issues are addressed, the relative profitability of farming will be increased and the viability of the farm family will be secured.

The study shows that governments have experimented with a number of strategies designed to provide some support services for small farmers. However, women farmers enjoy only limited access to the services in which they are most interested (e.g., credit, extension services, improved technology, and training programs), while there are plenty of programs that impart knowledge on sewing, cooking and housekeeping, for which the women display little interest. Nor do women derive much benefit from the governments' rural development programs and their related services, precisely because of the tendency to include a woman's rural development component within the confines of domestic programs and projects.

It has been argued that the failure to take cognizance of these issues and to approach agricultural planning and policy formulation from a gender perspective means that the full potential of all available resources is not being utilized. Increasing the productivity and viability of small farmers and women farmers can

only have a positive effect on the local food supply, national food security, and the development of the agricultural sector in the region.

In this context, a number of projects have been identified in each of the four participating countries, and are presented here under the following headings:

- Statistical visibility
- Outreach to rural women
- Information and training
- Technology
- Agroprocessing
- Credit
- Marketing
- Microenterprise development

Five of these projects are selected for their regional applicability, as they can be implemented in all four countries with little modification. Two additional projects developed for the region are presented under the appropriate headings. These regional projects are consistent with those suggested by the First Ladies of Barbados, Jamaica, and Suriname, participants in the Women Food Producers Project, and the First Lady of St. Lucia who was a special guest at the regional conference.

## *Statistical Visibility*

### Project: Improving Rural Women's Statistical Visibility (Guyana)

Definition of problem/justification

- Because of underrecording and underestimations of statistics reflecting women's involvement in the agricultural sector, erroneous policies with discriminatory bias result in unequal opportunities contrary to the provisions of Article 29 of Guyana's 1980 Constitution.

Specific objectives

- To provide planners with the information necessary for gender-sensitive policy and program planning through statistically visible, gender-disaggregated data.

- To provide gender-disaggregated data on a continuing basis.

- To train decision makers in the use of gender information.

Expected outputs

- Increased priority for data collection on the part of policymakers and planners.

- Design appropriate statistical information instruments.

- Gender-disaggregated data collection on a regular basis.

- Improved rural women's statistical visibility.

Activities to be executed

- Preparatory activities

  a. Redefinition of the following census terms: work, head of household, self-employment activities, and agricultural activities.

  b. Building of gender specificity into all data collection and compilation processes.

- Carrying out of a pilot project for the collection of gender-disaggregated data on rural farm households in five communities (in preparation for the conduct of a new National Rural Farm Household Survey).

- Training decision makers in the use of gender information.

**Project: Improvement of Statistics and Data Bases on Gender in Agricultural Development (Jamaica/Region)**

Definition of 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. Nonetheless, there is still a considerable data gap, particularly with respect to comparative analyses of the nature and scope of the respective participation of men and women in the production process. This limits the extent to which a gender framework can be applied in agricultural planning and policy formulation.

- Gender-specific information is not only important for the accurate measurement of women's contribution to agriculture but is also necessary to provide indicators of the extent of the equality or inequalities between men and women.

- In addition, gender differentials are 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 help to dispel misconceptions that have developed concerning the role of women in agricultural and rural development efforts. This should result in greater consideration being given to women's needs at both the 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.

Specific objectives

- To provide a comprehensive gender-disaggregated data base to increase the effectiveness of planning and policy formulation for agricultural development, thereby enhancing the full participation of both men and women in the process.

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

- 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 programs.

Expected outputs

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

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

- Increased recognition of the contribution made by women, relative to that of men, to agricultural development.

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

Activities to be executed

- Revision of the definitions and concepts used by the Statistical Institute (STATIN) to determine the economically active population.

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

- Undertake rural/urban disaggregation of official statistics.

- Through national censuses and surveys and special studies, collect gender-disaggregated data on the rural population in the following subject area classifications:

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

Possible implementing organizations or agencies

- The Data Bank and Evaluation Division of the Ministry of Agriculture, and the Statistical Institute of Jamaica.

**Project: Development of a Data-collection System and Data Base on Women Farmers and Their Participation and Contribution to Agriculture and Development (Suriname)**

Definition of problem/justification

- Due to the limited availability of data and information on women in agriculture, women's contribution to the agricultural output of the farm

unit is unrecognized and not mentioned in official statistics and agricultural development programs. For years, women have been excluded from active participation in agricultural development programs and projects.

- Findings of research and studies have shown the crucial role that women play in the production of the small-scale family farm unit. However, hitherto agricultural policies have been mainly geared toward large farm enterprises and women still do not get the attention they rightly deserve.

Specific objectives

- To contribute to a gender perspective in agricultural policies, programs, and projects and assist in agricultural planning and formulation.

- To achieve national development goals by supporting women food producers in their agricultural work, and thereby raise awareness of gender issues and the actual situation of women.

Expected outputs

- A data base for the agricultural policy planning system that is based on gender analysis and gender planning.

- Improvement in the overall situation of women food producers in the rural and agricultural setting.

- Improvement in the quality of life of the rural household family unit.

Activities to be executed

- Research and studies on the role and situation of women in the various subsectors of the rural and agricultural economy.

- Development of a comprehensive ongoing program of gender training for agricultural policymakers, planners, technical officers and extension officers.

- Review of existing agricultural programs and projects in gender-sensitive areas.

- Redesigning of programs and projects in the pipeline and under execution.

Possible implementing agencies

- IICA, the Ministry of Agriculture, and the Women's Bureau.

**Project: Census of Women's Organizations, Projects, and Programs (Suriname)**

Definition of problem/justification

- Several women's organizations are active in Suriname, gathering useful data and developing knowledge and experience on a range of subjects. In general, the women's organizations are not informed about each other's activities or the available data, and know-how and data are therefore used inefficiently.

Specific objectives

- To identify all women's groups and their activities, independent of any particular sector.
- To establish a communications network.

Expected outputs

- Efficient use of human and financial resources for the development of women's organizations and related issues.

Activities to be executed

- Preparation and implementation of a census.
- Creation of a data base with the census information, as well as structures to keep it up to date.

Possible implementing agencies

- Forum of NGOs.

## *Outreach to Rural Women*

**Project: Community-level Infrastructure Development (Region)**

Definition of problem/justification

- The Survey of Rural Women pointed up severe infrastructure problems in Jamaica, Guyana and Suriname. The lack of roads/usable paths, water, and poor drainage and irrigation were the main areas identified as hindering the development of small farms operated by women in these countries.

- As a result of poor roads/paths, women must utilize means other than motorized transport to move produce from the field to market. Typically, this means that women farmers transport heavy loads over long distances on their heads, backs, or in their hands.

- This situation therefore determines what women produce and may hinder the production of produce (e.g., bananas) that would provide them with higher returns, because of the difficulties posed in bringing it to market.

- The reliance on rainfall for irrigating plants is also a hindrance to development, especially with the increased incidence of drought due to global warming. Farmers lose their crops and are forced to consider plants that are resistant to drought, but which may not yield the quantities necessary for income generation.

- Inadequate drainage is a critical problem in Guyana because of the special nature of the country, lying as it does below sea level. This means that rigorous attention must be paid to the integrity of the inflows and outflows of water, particularly on "back-dams" where farmers typically carry out their activities.

Specific objectives

- To identify, with the participation of farmers, the precise infrastructure needs of the community.

- With the participation of farmers, to arrive at the most appropriate methods of addressing these needs, and to determine who or which agency could best manage the implementation thereof.

Expected outputs

- Alleviation of the main infrastructure problems that affect rural women food producers, through the possible implementation of the following: construction of mini-dams; clearing of paths, paving, and maintenance of designated farm roads; maintenance of drainage channels; and construction of appropriate irrigation systems.

Activities to be executed

- Consultations with farmers in communities to determine what their infrastructure needs are. Once needs are identified, design of projects by farmers and technicians together to address these needs, as well as agreement on the implementation process.

- Establishment of the mechanism agreed upon between farmers and technicians to ensure that maintenance is provided once projects have been implemented.

Possible implementing organizations or agencies

- Ministries of agriculture, NGOs, and rural development agencies.

**Project: Dissemination of Project Findings (Barbados)**

Definition of problem/justification

- Involvement of participants is critical to the success of projects. Experience has shown that projects that seek to involve the target group or participants in the design, planning and execution stages have a greater impact and a better chance of sustainability.

- As part of the ongoing search for alternative development models, ways of placing people at the center of their own development need to be found. This is a necessary step toward their empowerment.

- The findings and project proposals developed in the project on women food producers need to be shared with women farmers at the community level so that they can verify the findings in question and give their reactions to the proposals (i.e., whether they respond to the issues and problems identified and are feasible, and the possible levels of involvement of the women themselves).

Specific objectives

- To hold community workshops to disseminate the results of the project on women food producers and to the farming community in general.

- To obtain feedback from the target group as to the relevance of the proposals made.

- To encourage farmers' involvement in the implementation of proposals and the sustainability of the work.

Expected outputs

- Critical assessment and fine-tuning of project and proposals from the farmers' point of view.

- Information and guidelines for follow-up action and future planning of projects.

- Confidence and trust-building between farmers and researchers, and facilitation of information flow.

- Validation of people's knowledge and understanding of the situation within which they operate.

Activities to be executed

- Zoning of farmers to organize them into manageable units for the workshops.
- Planning and conducting of a series of participatory workshops.

Possible implementing organizations or agencies

- BADMC, Community Development Division, IICA, MAFF, and WAND.

**Project: Reaching Rural Women: Increasing Involvement and Gender Awareness Among Rural Women (Guyana)**

Definition of problem/justification

- Agricultural policies, programs and projects often fail either because of nonparticipation or very low levels of participation by women in the planning processes. Erroneous assumptions result in incorrect policies, which cast rural women in the role of uninformed participants at the project implementation stage. When the planners move off, the projects become nonsustainable and fail as a result.

Specific objectives

- To actively involve rural women food producers in the various stages of agricultural development, ranging from policy formulation to project implementation.
- To strengthen communications systems.
- To make women more aware of their capabilities as food producers.
- To increase rural women food producers' cash income.
- To foster high self-esteem among rural women food producers.

Expected outputs

- More and stronger communications systems.
- Institutionalized recognition of women as food producers.
- Better policy planning.
- Stronger institutional support.

- Higher self-esteem among women food producers.

Activities to be executed

- Training program for planners, implementors, NGOs, and rural women leaders for their subsequent involvement in communication/gender-sensitizing activities.

- Strengthening NGOs at the community level by providing technical help.

- Involving women food producers in policy and program planning.

**Project: Cleaning of Paths That Lead to Plots in the Interior (Suriname)**

Definition of problem/justification

- The method of farming in the interior is shifting cultivation. The distance between the village and new plots is increasing. The farmers, the majority of whom are women, have to walk long distances over sometimes impassable paths. They do this carrying their crops on their head and sometimes a baby on their back. They have to climb over tree trunks and wade across creeks.

Specific objectives

- To improve the condition of the paths, thereby lightening the burden of women in the interior.

- To provide tools and equipment to villagers to enable them to clean and maintain paths and cut tree trunks. The same tools could then be utilized to build bridges over creeks.

Expected output

- Better and easier lives for women farmers in the interior.

Activities to be executed

- Collect more data and, together with the people in the interior, identify the best solutions.

Implementing agencies

- NGOs presently active in the interior.

## *Information and Training*

### Project: Information Campaign for Rural Women (Region)

Definition of problem/justification

- Because of rural women's limited access to agricultural extension and other means of acquiring up-to-date information on agricultural practices, they remain virtually in the dark as far as new techniques and farm management methods for increasing productivity are concerned.

- Rural women's relatively limited access to education renders them ignorant of their legal rights with respect to land, inheritance, transfers of property, and the like. They tend to rely on traditional ways of viewing these issues in spite of the changes that are occurring around them on a daily basis. For example, the concept of family land is most used in rural areas. It is conceivable that family members who view the land from a development perspective may negate the rights of older members by legally administering property and thereby technically gaining control of such land, to the exclusion of whoever actually occupies the land.

- The failure to provide information on the use of chemicals at the point of sale means that women are unaware of the dangers to their health should they use chemicals during pregnancy. Also, clear instructions are not given and/or reinforced regarding the use of chemicals on vegetables at their varying stages of growth. It is conceivable, then, that users may unknowingly threaten the health of consumers.

Specific objectives

- To launch an information campaign in the countries that will raise the consciousness of women farmers in areas that affect their health, legal standing, and others about which they have limited information.

- To empower women farmers to increase their productivity, thereby enhancing their own lives and those of their family.

Expected outputs

- Increased awareness among women farmers of their legal rights with respect to the land they farm.

- Increased awareness among women farmers of the safe use of chemicals.

- Increased knowledge of women farmers of new techniques and farm management approaches to raise productivity levels and, eventually, their incomes.

- To bring rural women farmers into the twenty-first century by providing them with sustainable approaches to farming activities.

Activities to be executed

- Survey of rural women's information needs.

- Design of information packages to relate technical information simply and concisely, in the language of the users.

- The Survey of Women Food Producers in the four countries suggests that listening to the radio is the main source of entertainment and information for rural women. Watching television and talking with a neighbor rank as the second most important means of obtaining information. Radio and television programs will be designed and broadcast at times accessible to rural women so as to provide them with information on a wide range of topics.

- The survey also indicates that church clubs are the most frequently attended type of community organization, followed by parent-teacher associations, and farmers' organizations. Arrangements will be made with these organizations for guest speakers to impart information to rural women on their identified areas of need.

Possible implementing organizations or agencies

- Government information services.

**Project: Gender Awareness Training Programs (Barbados/Region)**

Definition of problem/justification

- The concept of "gender" is generally either unknown or misunderstood. Gender relations are socially constructed, and reinforced and sanctioned by societal institutions and structures, as well as by widely accepted practices and arrangements. Gender relations are based on male dominance and power. This has implications for the way in which female farmers operate.

- Policymakers and planners generally regard farmers as being a homogeneous group and can be described as "gender blind" with respect to the activities of women food producers.

- Available government resources and services have not adequately met the production-related needs of women working on small farms. The cost of this, in terms of economic growth, can be significant.

- Women carry a lot of responsibility for production on small farms and are therefore the source of much of the food produced, processed, and marketed

in Barbados. In view of this, it is imperative that policies be oriented toward women food producers.

The working hours of extension officers do not always coincide with the time that women are available, given women's heavy involvement in nonagricultural productive and reproductive activities.

In cases where a farm is managed jointly by a man and a woman, it is often assumed that the man is the farmer, and the woman's productive activities are not even taken into account. The data from the project survey suggest that on many farms where there are male and female partners, more often than not it is the woman who is the farmer.

Specific objectives

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

Expected outputs

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

Activities to be executed

- Identify relevant and appropriate agencies and personnel.

- Conduct a series of gender training programs aimed at meeting the specific requirements of each target group. The training programs will cover the following general areas:

    - the concept of gender, and how it impacts differentially on men and women (women's multiple roles, women's needs, social relations (male/female, female/female, male/male),

    - the characteristics of small-scale food production systems, with focus on the female farmer.

- For policymakers and planners, special attention will be given to the following:

    - the interrelationship between women's reproductive activities and agricultural production,

    - the characteristics inherent to development programs that contribute to maintaining women's secondary position in society,

    - the main resources that women, the family, and the community must have in rural development programs in order to change women's status,

    - incorporation of women, the family, and the community in project design.

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

    - reevaluation of negative perceptions of women as poor risk takers, and as poor candidates for large-scale loan funds,

    - creative financing strategies for funding women's projects.

- In the case of extension officers and technology transfer specialists, attention will be given to the following:

    - the level of participation in farm activities vis-à-vis men and women, and power relations with respect to decision making and the control of resources,

    - special characteristics of women with respect to the use of time, their availability for activities such as training, field days, demonstrations, and so on,

    - effects of technological innovation and application on women (e.g., the use of heavy or unwieldy tools and implements, the effect of cultural practices, and the use of agrochemicals on women's health).

Possible implementing organizations or agencies

- Bureau of Women's Affairs, Centre for Gender and Development Studies, IICA, University of the West Indies, and WAND.

**Project: Linking the Small Farm and Tourism Sectors (Barbados/Region)**

Definition of problem/justification

- Tourism is a major contributor to the GDP of Barbados.

- Barbadian hoteliers have reported that the major barriers to the development of greater linkages with the farming sector are the lack of availability of commodities, and poor and inconsistent quality.

- Weak linkages exist because of lack of communication between hoteliers and farmers.

- The development of economic linkages between the tourism and agricultural sectors would induce an internally generated development process through the generation of additional employment and incomes, and through the conservation of foreign exchange.

- The extent to which the small farmer can take advantage of the market opportunities in the tourism and hospitality industries therefore depends on access to market information, particularly with respect to purchasing schedules, quantity requirements, grades and quality standards, and prices. It also depends on access to technical assistance with respect to production and postharvest handling methods and techniques to achieve required quality levels, and training in marketing strategies and techniques to achieve better price returns.

Specific objectives

- To create and/or strengthen linkages between small farmer production and tourism through the identification of market opportunities and the facilitation of trade between farmers and buyers in the hotel and hospitality industries.

- To create a pool of high-quality farmers through the provision of training in the techniques of production, postharvest handling and processing, which will enable them to meet the required specifications and standards of the buyers.

- To provide basic training in market development and promotion, in order to enable the farmer to achieve optimal price returns.

- To compile and disseminate relevant supply and delivery information among farmers.

Expected outputs

- Generation of higher farm incomes through the establishment of targeted markets, and increased sales levels.
- Employment generation at the levels of production, processing, distribution, and marketing.
- Increased utilization of locally produced goods and services by the tourism sector.
- Conservation of foreign exchange.
- Positive spillover effects on domestic consumers, in terms of greater appreciation of local foods and local cuisine, and consequently greater demand for and utilization of locally produced agricultural commodities and agroprocessed goods.

Activities to be executed

- Selection of farmers with the capability for, interest in, and commitment to the production of high-quality agricultural produce and processed foods for the tourism sector.
- Identification of potential buyers within the tourism industry.
- Determination of distribution and purchasing systems for fresh agricultural produce and agroprocessed products.
- Implementation of training in production and postharvest handling technology and processing techniques for specific commodities.
- Implementation of training in marketing.
- Formulation and implementation of operational/marketing plans for the development of identified areas of opportunity. These plans would include promotional activities such as trade shows specifically geared to the hotel and hospitality industries, gourmet cooking demonstrations using local foods, and "Buy Local" campaigns. Plans would also include the establishment of information databases on specifications, and demand/supply conditions.

Possible implementing organizations or agencies

- BADMC, Barbados Hotel and Tourism Association, BIMAP, Bureau of Women's Affairs, EEC (funding), IDB (funding), National Council of Science and Technology, NDF, and WID.

**Project: Providing Information to Rural Women: Generating and Accessing Information for Decision Making (Guyana)**

Definition of problem/justification

- Because of a lack of information at the local community and technical levels, rural women food producers continually make erroneous decisions. This results in a high degree of failure and, therefore, wasted resources. All of this is reflected in the continued low socioeconomic status of rural women in agriculture.

Specific objectives

- To provide a legal and technical data base for informed decision making on the farm, thereby ensuring a high degree of success and increased economic returns.
- To institutionalize the organized and periodic compilation of information on community resources.
- To organize the availability of technical information.
- To put in place systems that afford easy access to this important decision-making information.

Expected outputs

- Inclusion of women in planning processes.
- Priority given to technical information.
- Better leadership.
- Information on the community's agricultural, human, physical, and natural resources collected periodically using an organized system.
- Accessibility to technical information.

Activities to be executed

- Training in leadership.
- Compilation of community resources.
- Selection and training of resident women food producers to serve as extensionists.
- Making technical information available and easily accessible.

**Project: Proposal for the Establishment of a Research Center and a Documentation Center within the Faculty of Agriculture, University of Guyana (Guyana)**

Definition of problem/justification

- There is a general lack of information in the agriculture sector in Guyana, due mainly to the following:

  a. Inadequate and poor research

     - very little documented
     - research done by unsuitable personnel
     - badly constructed questionnaires
     - poor data collection
     - poor data analysis

  b. Ill-equipped and disorganized storehouses of information

     - lack of all types of resources
     - collections are not properly catalogued, classified, or indexed

  c. Nonavailability of past research papers

     - researchers selfishly hang on to their papers
     - papers locked away in cupboards

- This disastrous situation is a result of the country's economic constraints and government's seeming nonrecognition of the effects, over the years, of the absence of information to feed into the developmental process.

- Timely and relevant information is essential to enhance the decision making of planning and policymakers in this sector. The issues and problems of small farmers, particularly women, cannot be addressed if information on their operations is not properly documented and made accessible.

- The absence of information could, therefore, result in decisions being made too late or not at all. In some cases wrong decisions are made.

- The following items are indicators of areas where, because past plans did not address women's issues, information is badly need:

  - land tenure
  - credit
  - technology
  - marketing
  - social needs

- The process of agricultural development, therefore, presents challenges and opportunities vis-à-vis the establishment of an effective and efficient research and documentation system, something which is badly needed in Guyana.

- The University of Guyana should establish a research center and a documentation center within the Faculty of Agriculture. Both need to be well-equipped and adequately staffed by suitable personnel. Each divisional head will report directly to the dean of the faculty.

Specific objectives

Research Center

- To conduct in-depth research on all agricultural development, including the contribution made by women.

- To satisfy the research needs of established, as well as nonrecognized, community groups (examples of established groups include Gaibank, NARI, and Repaha; unrecognized groups include women's groups).

- To assess the agricultural research needs of the country and initiate relevant studies.

- To establish a core of trained researchers specifically for the effective functioning of the center.

- To conduct seminars/workshops for staff, students, and external researchers in research techniques and methods.

- To deposit a copy of every research paper in the Documentation Center.

Documentation Center

- To identify, acquire, process, and store for retrieval and dissemination, information that is relevant to agricultural research and development.

- To meet the information needs of staff and students of the faculty, as well as researchers from external agricultural agencies.

- To act as a depository for all research papers produced by the Personnel Center.

- To engage in an effective acquisitions policy.

- To catalogue and classify all documents.

- To offer an effective current awareness service.

- To maintain an efficient staff and interlibrary loan system.

- To maintain a close relationship with other libraries, especially the major ones, as well as agencies pertaining to women's affairs.

- To acquire and organize all research papers produced by staff of the faculty

Expected outputs

- The work of these two centers will complement each other and be an integral part of the faculty. Their goals and objectives must be integrated into those of the faculty and they must operate in accordance with its policies and regulations.

- The establishment of the proposed research and documentation centers will ensure the following:

  - Research is done in almost all areas of agricultural development.

  - Research will be better planned and conducted.

  - Researchers will be better equipped.

  - Information will be properly organized for easy retrieval and dissemination.

  - Analysis of issues in the agricultural sector will be based on adequate information —the basis for decision making and planning.

  - The benefits of correct decisions made by agricultural planners will impact on producers and marketers in the production system.

**Project: Increasing Returns to Rural Women Food Producers (Guyana)**

Definition of problem/justification

- The perpetuation of the poverty cycle among rural women food producers is rooted in their inability to enhance their own capabilities, as well as those of their family members. This in turn is a direct result of their inability to increase the economic returns on their farming activities because of the handicaps they face —inadequate technical assistance, poor access to credit, and scarce economic resources.

Specific objectives

- To improve the economic returns of women in agriculture.

- To provide access to technical assistance.
- To provide access to credit.
- To improve the low/subsistence level of production and productivity.
- To provide marketing information and opportunities.

Expected outputs

- Better husbandry practices.
- Better use of inputs.
- Increased production and productivity.
- Easier marketing.
- Increased economic returns.

Activities to be executed

- Training in husbandry, recognition of quality seeds and other inputs.
- Training in the use of suitable equipment.
- Training in the use of fertilizers, weedicides, and pesticides.
- Information-related activities with regard to modalities and procedures of agricultural land acquisition and farm enhancement credit facilities.

**Project: Extension Training Program for Women Food Producers (Jamaica)**

Definition of problem/justification

- Agriculture continues to be the fastest-growing sector of the Jamaican economy. In 1993 it grew by 8.8% and accounted for 24% of the employed labor force.
- Women food producers account for 20-25% of independent farmers. In absolute terms, this amounts to 35,000-40,000 female farmers islandwide.
- Domestic food crops make up the bulk of agricultural production and are produced largely by small-scale producers. In 1992 the total area of these crops under cultivation was in the region of 490,000 hectares. Small farms,

however, suffer from relatively low levels of technology and, consequently, low productivity and farm family incomes.

- While a fair number of improved technologies are available, many more are needed. Improved seeds, commercial fertilizers, and agricultural chemicals are the main types of technology available at present. Improved technologies, however, are urgently needed in other areas (e.g., farming system approaches and on-farm equipment and tools).

- Not only are improved technologies inadequate, but small-scale producers have only limited access to what is available. In consequence, recommended practices are only partially adopted. For example, while fertilizers are widely used, they are largely misused. The same is true of agricultural chemicals. Similarly, conservation structures are put in place but not maintained, and recommended cultural practices are initiated but not followed through.

- Several factors contribute to the low rate of adoption. These include the following:

  a. The main technology transfer institution, the government agricultural extension service (now Rural Agricultural Development Agency - RADA), is inadequately staffed and lacks the financial resources to give adequate coverage to the large number of individual producers, and to be efficient and effective.

  b. Small-scale producers generally have a low education level and consequently have little or no access to improved technologies that are provided through the printed media, mainly in the form of bulletins, brochures, manuals, pamphlets, and labels.

  c. The operations of small-scale producers are characterized by a shortage of working capital linked to limited access to credit. Hence, they are unable to purchase recommended inputs in recommended quantities and on a timely basis.

  d. The planning and implementation of agricultural extension training do not explicitly take into consideration the special circumstances of women. Women have less time and less flexibility of available time to participate in extension training.

- Given the growing trend toward cuts in government spending, meaningful technological improvements cannot be expected to take place through the traditional interventions of government.

Specific objectives

- To increase the productivity and incomes of small-scale women food producers in the parishes of Trelawny, Manchester, and St. Ann.

- To train some 4000 women farmers scattered over the three parishes in the following subject areas:

  a. proper use of commercial fertilizers and agricultural chemicals,

  b. improved methods of postharvest handling,

  c. mini-sett yam technology and other improved methods of farming.

- To design a system to facilitate the continued dissemination of information by the trained farmers among other community members.

Expected outputs

- Eighty demonstration plots distributed between the three parishes and strategically located in each parish.

- Four thousand small-scale women producers trained in improved agricultural practices, including the proper use of inorganic fertilizers and agricultural chemicals.

- A community-focused arrangement in place and functioning for the continued dissemination of improved agricultural information among community members.

Activities to be executed

- The project will involve a combination of a public awareness program and a series of on-farm demonstration sites strategically located in selected farming communities in each parish. Each parish will have between 20 and 30 sites.

- Sites will be located on private farm holdings on a voluntary basis. Demonstrations and discussions will take place on these sites on scheduled days.

- The public education program will inform community members of the location of sites and the schedule of demonstrations and discussion sessions. Further dissemination of the information received at demonstration sites will be achieved by passing it on to family members, neighbors, and friends through existing community communications channels.

Possible implementing organization or agency

- RADA.

**Project: Institutional Strengthening of Agricultural Institutions, the Extension Services, and the Agrarian Information Unit of the Ministry of Agriculture (Suriname)**

Definition of problem/justification

- The Extension Services office, a section of the Agrarian Information Unit, is not functioning adequately and therefore cannot provide an optimal service to farmers. There is a lack of supporting structures such as a cadre, transportation, financial means, material and equipment, and so on, resulting in poor service to farmers.

Specific objectives

- To reestablish the extension services in order to support small-scale farmers, particularly women in their roles as agriculturalists.

- To improve the efficiency of the Agrarian Information Unit and make extension services available to women producers. The promotion of a special program to attract and mobilize more women to become extension officers.

Expected outputs

- Reorganization and strengthening of the Agrarian Information Unit.

- Improved working relationship between extension officers, field workers, and farmers.

- Improved distribution of agrarian information and services.

- Training packages for courses on planting material, cultivation techniques, postharvest handling, and the marketing of agricultural products.

- Greater gender awareness among planning staff, extension officers, field workers, and the NGOs responsible for agricultural development.

Activities to be executed

- Training to upgrade the skills of extension officers, field workers, and planners at the Agrarian Information Unit in information gathering and distribution, targeting small farmers, and placing special emphasis on providing women farmers with access to services, facilities, training, credit, land, and cooperatives.

- Preparation and reproduction of training material for distribution among extension agents and farmers, as well as the production of audiovisual materials.

- Promotion of research activities on cultivation techniques, crop varieties, plant propagation, postharvest handling and marketing, and simple and efficient production procedures.

- The elaboration of an integrated development strategy structure through the Ministry of Agriculture, NGOs, and farmers' organizations for the distribution of farm inputs, machines, and planting materials.

Possible implementing agency

- Ministry of Agriculture.

**Project: Basic Training in Agricultural Skills and Knowledge (Suriname)**

Definition of problem/justification

- Hitherto there has been no special training program in basic agricultural skills and knowledge (in planting material, cultivation techniques, use of fertilizers, gaining access to land, credit, technical information, assistance, and funding), especially where small farmers are concerned. Such a program could be of great help in incorporating rural women into the process of agricultural and rural development.

Specific objectives

- To mobilize women to participate in agricultural training and, thereby, in identifying their needs at both the production and rural community level.

- To increase female enrollment in agricultural and home economics training, also including aspects of health, nutrition, and literacy.

Expected outputs

- Increased women's access to agricultural training programs, land, credit facilities, and new and efficient production technologies that can lessen the burden of women's work.

- Enhance women's full-time participation in agrarian programs that will highlight their productive role and contribution to production and, therefore, make it possible to quantify women's contribution to production and reproduction activities.

- Increased domestic food supply and improved subsistence food production.

- Improved quality of rural life.

- Awareness and consciousness among women of their vital role and contribution to rural and agricultural production.

Activities to be executed

- Design and implementation of training courses, workshops carried out and field visits made to women farmers and farm enterprises.

- Distribution or dissemination of training materials, inputs, brochures, and audiovisual materials.

- Setting up of demonstration pilot projects (plants) for agricultural training.

Possible implementing organizations or agencies

- IICA, Ministry of Agriculture, and NGOs (PAS and others).

## *Technology*

### Project: Technology Design for Small-Scale Food Production (Barbados/Region)

Definition of problem/justification

- Women food producers have highlighted the provision of adequate extension services, cheaper inputs, and access to modern equipment as areas in which improvements are needed in regard to the production, processing, and marketing of food crops and livestock in Barbados. In an effort to address these constraints, this proposal aims to improve technology with respect to irrigation, animal feeds, and the use of chemicals and fertilizers.

Specific objectives

- To design appropriate systems for rainwater catchment, storage, and distribution so as to reduce the cost of irrigation, particularly in the dry season.

- To design animal feed formulations that utilize locally available forages such as lucaena, and reduce the need to import costly feeds.

- To conduct trials on the increased use of organic fertilizers by using locally available materials, such as compost, pen manures, blood meal, and fish meal.

- To investigate methods and techniques for minimizing the use of chemicals for crop production, so as to protect the health of farmers and consumers alike and safeguard the island's groundwater resources.

- To disseminate the information to farmers through documentation, training, and demonstrations.

Expected outputs

- Reduced production costs due to a reduction in the cost of major production components, namely water, animal feed inputs, chemicals, and fertilizers.
- Increased extension support in the application of new technologies.
- Increased agricultural productivity and incomes.
- Progress toward a more sustainable form of agricultural development through the use of locally available and indigenous materials and by-products, and protection of natural water resources from chemical pollution.
- Improved health of farmers and consumers through the consumption of more "healthy" foods and reduced exposure to, and ingestion of, agricultural chemicals.
- Spin-off benefits for industry with respect to the commercial design and manufacture of water catchment and storage, silage, and composting systems.

Activities to be executed

- Water catchment systems
  a. Evaluation of water resources in selected small-farming communities.
  b. Identification and design of simple on-farm systems for water catchment, storage, and distribution that utilize a high percentage of local materials and can be established using farm labor.
  c. Training of farmers in the installation and operation of systems.
- Feed formulations
  a. Identification of local plants and ingredients that can be used in feed formulations.
  b. Design formulations that are cost-effective, nutritionally adequate, and appropriate to current feeding systems.
  c. Feeding trials with various classes of livestock.
  d. Training of farmers in the use of the formulation.

Use of organic fertilizer

a. Identification and assessment of locally available ingredients that can be used as fertilizers or in mixes.

b. Fertilizer trials (including cost analysis).

c. Training of farmers in the use of the fertilizer.

- Use of nonchemical methods of pest and weed control

a. Identification of alternative methods for controlling economically important pests.

b. Development of programs for reduced chemical use, including techniques such as crop rotation, the use of natural predators and protective plant species, and the use of stickers.

c. Training of farmers in the application of techniques.

It is envisaged that these programs will be included in the research and development programs of the existing institutions that offer agricultural research and extension, and that close liaison among these agencies will maximize limited resources and reduce duplication of effort.

Possible implementing organizations or agencies

- BADMC, BAS, CARDI, FAO (funding and technical assistance), IDB (funding), and MAFF.

**Project: Research and Development Program for Labor-Saving Mechanical Tools Suitable for Hillside Farmers (Jamaica)**

Definition of problem/justification

- The topography of Jamaica presents a serious constraint to agricultural development. Approximately 80% of the land has been classified as having slopes of between 15 and 30 degrees. Most small farmers are located on hillside lands with steep slopes where the use of large-scale mechanical equipment is not appropriate. Traditional hand tools are therefore the principal implements used in farming, making it very arduous and labor-intensive.

- Although this poses a problem for all small farmers, women are particularly affected because of their multiple roles, encompassing direct productive activities and domestic responsibilities. This is confirmed by the fact that labor was the factor most frequently identified by respondents in

the Women Food Producers Survey as a major constraint to their agricultural activities.

- In order to raise agricultural productivity and reduce the burden on women and men involved in small-scale production, it is necessary to implement a serious program of research and development on mechanical tools suitable for hillside farming.

- The subject of the mechanization of small farming has to date been largely neglected, and there are experiences at the international level that have been documented and from which Jamaica could benefit.

- A regional workshop entitled Agricultural Mechanization in the Commonwealth Caribbean was hosted by the Government of Trinidad and Tobago in March 1991, under the sponsorship of the Commonwealth and Caribbean Community (CARICOM) Secretariats with support from the Caribbean Development Bank (CDB) and the Canada Fund, among other agencies. The event was significant in that it provided the first opportunity for an exchange of information on the initiatives being undertaken in some CARICOM member countries in this important area.

- Participants in this workshop described and discussed the circumstances in their respective countries pertaining to agricultural mechanization, examined approaches to mechanization policies and strategies for small developing countries in the Caribbean, and looked at experiences in fostering agricultural mechanization in some Asian countries.

- It was recognized that topographical and climatic limitations called for novel approaches to mechanization in the region and the experiences of some countries in fostering mechanization to reduce drudgery and increase farmer productivity was extremely encouraging.

Specific objectives

- To increase agricultural productivity on small hillside farms in Jamaica.

- To develop mechanical tools suitable for use on hillside farms.

- To reduce the drudgery of agricultural labor.

- To foster more efficient use of women's time.

Expected outputs

- Availability of a range of mechanical tools suitable for hillside farms.

- Increased production on small farms.

- Increased farm income.
- Reduction in women's labor burden.

Activities to be executed

- Identification of existing institutions and countries currently engaged in the development of small mechanical tools.
- Implementation of a research program for the development of mechanical tools for use on small farms.
- Launching of a pilot project for the testing of tools.
- Development and commercial distribution of tools to farmers.
- Training of females and male farmers in the use of the tools.

Possible implementing organizations or agencies

- CARDI, RADA, SRC, and the University of the West Indies.

### *Agroprocessing*

#### Project: Establishment of a Women's Processing Cooperative (Barbados)

Definition of problem/justification

- Marketing is one of main constraints faced by small farmers. Processing offers an alternative market for small farmers' produce, and the opportunity for higher returns because of added value input.
- Many small farmers are not aware of the possible processing applications for their commodities and/or their commercial potential.
- Processed items currently produced by small farmers and microenterprises lack competitive edge because of nondifferentiation of product types, and noncompliance with regulations governing packaging and labeling.
- The establishment of a processing cooperative would permit resources to be pooled for the production of commodities to standard specifications. It would also facilitate access to cheaper production inputs through bulk purchase and access to bulk buyers in local, regional, and extraregional markets (hotels, food service establishments, government institutions, and downstream processors).

Specific objectives

- To establish a facility for the operation of a cooperative processing operation.
- To expand the market opportunities available to the small farmer and microenterprises.
- To offer alternative ways of utilizing products, both for home consumption and commercial production.
- To upgrade the quality of processed products currently available on the market.
- To develop sustainable linkages between the rural sector and other sectors of the economy.

Expected outputs

- Higher levels of earnings in the rural sector.
- Increased employment and incomes.
- Greater utilization of locally produced commodities.
- Improved nutritional status of farm families, and of the general population.

Activities to be executed

- Carrying out of research to identify processed products with market potential.
- Matching of market opportunities with capability of farmers in terms of agricultural commodities available, technical skills, and level of interest.
- Selection of product mix and determination of throughput capacity of processing operation.
- Identification of an appropriate location for the cooperative (bearing in mind the location of production areas, women's time and availability, and legal and engineering requirements).
- Design of the layout of the facility (bearing in mind the possible need for on-site support services such as day care).
- Identification and selection of equipment and machinery for processing operations.

- Construction and commissioning of facility.

- Identification and selection of farmers and microentrepreneurs for training.

- Provision of training in theoretical basics of food processing, and practical application of methods and techniques for the production of specific products.

- Provision of training in the establishment and operation of a cooperative.

- Provision of training in marketing.

Possible implementing organizations or agencies

- BADMC, BIMAP, Bureau of Women's Affairs, FAO (funding), IDB (funding), National Council of Science and Technology, NDF, UNIFEM, and WID.

**Project: Agroprocessing Activities (Suriname)**

Definition of problem/justification

- Due to the absence of small-scale agroprocessing centers at the cottage-industry (home-industry) level which could equip women with the necessary skills and tools for agroprocessing, the Home Economics Section of the Ministry of Agriculture is the main institution for the promotion and implementation of this project idea. However, because of the lack of the necessary conditions, the Home Economics Section cannot undertake such a project and therefore needs technical assistance and financial support.

Specific objectives

- To improve the Home Economics Section by equipping it with the required social infrastructure and thereby helping the section to assist NGOs, women organizations, cooperatives, and so on with setting up programs and projects for the transfer of appropriate technologies and knowledge regarding agroprocessing and preserving.

- The development and improvement of agroprocessing activities at the micro (cottage-industry) level and the promotion of income-generating activities among rural women.

Expected outputs

- Reduction in the postharvest loss of agricultural products and the expansion of the cottage industry.

- Technical packages developed for the production, postharvest handling, and marketing of agricultural products.

- Improved efficiency and introduction of appropriate technologies for the processing of agricultural products (rice, peanuts, cassava, and vegetables) and the marketing of these products.

- Establishment of a better equipped, highly developed Home Economics Section in the Ministry of Agriculture.

- Improved services in home maintenance and home management for rural households.

Activities to be executed

- Training of a cadre in new appropriate technologies in food processing.

- Training courses for rural women in small-scale agroprocessing.

- Training in suitable harvesting techniques, postharvest handling and processing, distribution, and management of production.

- Training in basic accounting and the management of commercial activities, raw materials, processing, labor, and wholesale and retail prices of the finished products.

Possible implementing agencies

- Forum of NGOs, Ministry of Agriculture, and Ministry of Internal Affairs.

## *Credit*

### Project: Credit for Agricultural Development and Land Lease Project (Barbados)

Definition of problem/justification

- Barbados's land distribution is extremely skewed, with the majority of small farmers operating on lots on which expansion is virtually impossible. Data from the 1989 Agricultural Census show that most small-scale production takes place on holdings of less than 0.5 hectares. Included in this category are over 4000 "landless" holdings. Small women farmers operate on approximately 0.14 hectares each.

- If policymakers wish to encourage agricultural production and development, they need to assist small farmers in expanding their operations, if desired, and becoming viable entities.

- There are large tracts of government land presently lying idle.

- In its 1993-2000 Sector Plan, the Ministry of Agriculture, Food, and Fisheries has indicated its intention of making some of this idle land available to landless farmers.

- In addition to making land available to farmers, other support mechanisms such as credit facilities and technical support have to be in place to permit the successful development of agricultural enterprises.

Specific objectives

- To encourage and assist small farmers who have potential, but inadequate loan security, to establish profitable enterprises through the provision of finance, training, and technical assistance.

- To assist in the sustainability of the farm family unit by increasing farm income.

- To bring idle land back into production through the diversification of the agricultural production base.

Expected outputs

- Increased productivity of the farming sector.

- Increase in farm incomes.

- Continued expansion of the government's current diversification program.

- Establishment of links between agricultural production, processing, and export.

- Expansion of financing agencies' loan portfolios through the inclusion of small farmers previously outside of the banking system.

Activities to be executed

- The establishment and management of a special credit fund for agricultural development.

- The establishment of an agreement between government and financing agencies to make land available to project participants on a leasehold basis.

- The establishment of agreements with relevant training institutions (Ministry of Agriculture, NDFB) for the provision of technical assistance.

- Selection of farmers with interest, commitment, and potential.

- Preparation of business plans, and approval of loans.

Possible implementing organizations or agencies

- Agricultural Division of the Barbados National Bank, BADMC, Ministry of Agriculture, Food, and Fisheries, NDF, and WID.

**Project: Informal Credit System for Agricultural Producers (Jamaica/Region)**

Definition of problem/justification

- Small farmers as a group, and women in particular, experience difficulties in accessing credit from formal banking institutions, due mainly to a 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, mainly by female small-scale producers. These include the Grameen Bank in Bangladesh and the informal savings collectors in Ghana known as "Sou Sou."

- The traditional partner system in Jamaica (Meeting Turn in Barbados) is very similar in nature to the West African Sou Sou and can be successfully promoted to mobilize funds to be used by both men and women for small farm development. At present it is the preferred informal method used by women farmers to obtain funds for development.

Specific objectives

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

- To develop a vibrant informal rural financial services network that could serve as intermediary to the formal system.

- To promote rural savings.

- To expand the scope and potential of the traditional "partner" system.

- To create a locally based pool of funds for lending to small-scale producers.

Expected outputs

- Community-based network of small farmers' savings groups islandwide with full participation by women.

- Availability of low-cost credit to small farmers with equal access by men and women to these resources.

- Increased on-farm investments and greater productivity of small-scale producers.

Activities to be executed

- Review and analysis of the functions of the traditional "partner" system as it relates to rural areas.

- Promotion and organization of a small farmers' savings group, with special efforts to incorporate the participation of women.

- Implementation of training in the use of financial management and cooperative development among small farmers, ensuring the equal participation of men and women.

- Design of rural informal credit network with mechanism for linkage with formal financial services sector.

Possible implementing organizations or agencies

- ADA, ACB, and RADA.

## *Marketing*

### Project: Higglers Associations and Business Ventures (Jamaica)

Definition of problem/justification

- Women have been the leading distributors of agricultural commodities on the domestic market for many decades. Today upwards of 20,000 women (popularly known as higglers) make a livelihood from this economic activity. This means that, with the size of the household averaging about five individuals, this occupation impacts directly on well over 100,000 family members annually. It is very likely that women will hold this position in the foreseeable future and that their numbers may even increase due to planned increases in the production of the products they sell.

- As small individual operators with generally low educational levels, they lack many of the resources needed for them to provide themselves with the infrastructure, facilities, and services required to carry out the functions of marketing on an efficient and economical basis. Accordingly, their operations are characterized by the following:

a. A lack not only of the appropriate techniques for storing, grading, packaging, and general handling of the commodities in which they trade, but of the proper facilities as well.

b. A reliance on private transportation services that are not designed or prepared for the transport of perishable agricultural commodities, nor for the transport of passengers in many cases. Transportation facilities are, therefore, in most instances quite unsuitable for the higgler's purpose.

c. A reliance on the provision of market buildings by government. These are often not equipped with basic amenities or marketing facilities. Even where these are provided, they are usually not properly maintained.

- As a consequence, not only are the operations of the higgler regarded as economically inefficient but higglers suffer great hardships and indignity in providing what is generally accepted to be a very vital service. Their survival has been for the most part at a subsistence level, and made possible perhaps by the resilience and resourcefulness they display. It is not surprising that unlike most other business operators, the vast majority of higglers have not been able, after 20 or 30 years in the business, to accumulate savings or goods. Instead, their standard of living remains one of the lowest in society.

Specific objectives

- To improve prices and the income levels of small-scale producers generally, and women producers in particular.

- To improve the physical working conditions of rural higglers.

- To improve the income levels of this group.

- To reduce the existing levels of inefficiencies in the system of internal distribution of domestic agricultural production.

Expected outputs

- An association of rural higglers legally established and functioning.

- A marketing company owned and operated by higglers.

- A core group of higglers trained and skilled in the operation of the marketing company.

- Adequate, appropriate, and reliable transportation services owned or otherwise controlled by higglers.

- Postharvest handling services and facilities owned and operated by higglers.

Activities to be executed

- The objectives of this project will be achieved through an islandwide program of institutional developments and training specifically for rural higglers. Higglers will first be organized into legal associations on a parish basis. Each association will then establish business entities (marketing companies) to provide various marketing services and facilities. For example, under the government's privatization program, associations of higglers could take over the running of parish markets.

- Similarly, the associations will purchase or otherwise acquire transportation services that are appropriate and adequate for the transportation of goods as well as passengers. The venture will be financed through an equity contribution in the form of shares from the association membership, and from loans.

- A technical assistance program, which would include a long-term institutional development advisor, will work with the Bureau of Women's Affairs and selected NGOs to assist in the establishment of a higglers association and the subsequent business entities.

Possible implementing organizations or agencies

- Ministry of Agriculture, and RADA.

**Project: Agriculture and Marketing Boards (Suriname)**

Definition of problem/justification

- Marketing of small farmers' produce is chaotic. Small farmers, especially women farmers, are unable to sell their products directly to consumers or to exporters because of their lack of know-how and financial resources. They are forced to sell agricultural products to intermediaries who enjoy a nearly monopolistic position. These buyers act as price-setters and the farmers are price-takers. Farm income is not sufficient to allow farmers to buy farm implements.

Specific objectives

- To increase farm incomes through the development of a structure to channel a more realistic amount of profits from the sale of farm products back to the farmers.

- To establish a marketing and export board.

Expected output

- Increases in production and decreases in consumer prices.

Activities to be executed

- Install a commission with representatives of farmers, traders, and government officials to do the preparatory work.

Implementing agencies

- Ministry of Agriculture, and Ministry of Trade.

**Project: Pokigron as a Market Place for the Interior (Suriname)**

Definition of problem/justification

- The interior peoples along the Suriname River have a surplus of farm products, which they cannot sell because of inadequate means of transportation to more populated areas. Establishing a market in Pokigron would mean that farmers could transport their farm products by boat to this village, and traders from the capital could buy the products.

Specific objectives

- To create a market for the surplus of farm products from the interior.
- To increase the farm incomes of women in the interior and stimulate their farming activities.

Expected outputs

- Increase of farm production and better lives for the peoples of the interior.

Activities to be executed

- Repair the road from Pokigron to Paramaribo.

Implementing agency

- Government of Suriname.

## *Microenterprise Development*

**Project: Commercialization of the Bridgetown Market Concept (Barbados)**

Background

- Bridgetown Market is an annual event in the Crop Over celebrations in Barbados. It showcases the work of microentrepreneurs in handicraft, agricultural production, food processing, and food preparation. It is an ideal

opportunity for locals and tourists alike to sample local fare and discover the tremendous potential of the small business sector.

- This proposal is aimed at making the Bridgetown Market a permanent feature on the Barbadian landscape in order to facilitate increased linkages between rural and urban sectors, increase the utilization of and appreciation for local foods, and exploit export market opportunities by offering visitors local cuisine and handicraft products.

- The project will involve the establishment of an open-air facility with attractive booths, seating accommodation, and entertainment areas. Booths would be rented to concessionaires at reasonable rates. As far as the site is concerned, Baxter's Road, Pelican Village, or Cheapside would be ideal. In the case of both Baxter's Road and Pelican Village, the siting of the facility would lead to the upgrading of these landmarks and a resurgence of business. In the case of Cheapside, the facility could be located in the existing market.

- This proposal has tremendous potential for the participation of, and investment by, the private sector.

Definition of problem/justification

- Marketing is the one of main constraints faced by small farmers and microentrepreneurs. The establishment of this facility would provide a daily market for the supply of fresh produce and fish to food preparation areas, and for processed products (such as seasoning, fruit juices, syrups, and sauces).

- The Bridgetown Market would provide significant employment opportunities vis-à-vis the management and operation of the facility, as well as the supply and delivery of inputs to the facility.

- Visitors and locals alike would be able to sample local cuisine at affordable prices, in comfortable, pleasant surroundings.

Specific objectives

- To establish a structured, open-air street market for the promotion and sale of prepared foods, agroprocessed products, handicrafts, art, and agricultural produce.

- To invite private sector participation in the establishment of the facility.

- To increase consumption of locally produced foods and goods.

- To provide employment opportunities, particularly for women and youth.

- To develop sustainable linkages between the rural sector and other sectors of the economy.

Expected outputs

- Upgrading of the current marketing infrastructure and marketing systems.
- Higher levels of earnings in the rural sector.
- Increased employment and incomes.
- Greater utilization of locally produced commodities.
- Improved quality of life.

Activities to be executed

- Preparation of an investment profile, and identification of possible private sector participation. This profile would include preliminary engineering design and architectural drawings for the facility, identification of possible sites, a description of the operation and management procedure, and financial projections.
- Securing of financial resources.
- Construction of facility.
- Tendering for concessionaires.
- Hiring of employees.
- Promotion of the facility.

Possible implementing organizations or agencies

- BIDC, CTO, EEC (funding), IDB (funding), MAFF, NDF, and WID.

**Project: Policy Paper on Micro- and Small-Scale Enterprises in Agriculture (Guyana)**

Background

- Micro- and small-scale enterprises make up a large part of the enterprises in developing countries and are increasingly valued by governments and donor agencies as units of production and generators of employment. While few precise definitions exist, this form of production can be characterized as being relatively small-scale, family-owned, reliant on raw indigenous materials and labor-intensive technology, and operating in unrelated markets (USAID, 1983). The scope of activities in the informal sector is varied. For women with family responsibilities and few formal skills, the informal sector is often their only source of income.

- In Guyana, there is an awareness of the potential economic contribution that small/microenterprises can make to development, but no definite public sector policies and programs to assist growth and development in this vital sector. The small and micro-sized entrepreneurs, therefore, continue to operate under very difficult conditions, mainly due to organizational, systematic, and financial problems.

- In principle, it is desirable that all sectors of the economy (small, medium, and large) be permitted to function in the most efficient manner through the government's sound and effective economic, financial, and fiscal policies.

Definition of problem/justification

- One of the country's major problems in small business development is that government has failed to define a small/microenterprise. This has led to much confusion and, in many cases, the exclusion of women in agriculture (processing) from benefits such as tax concessions, developmental programs, and so on.

- The definitions of the small/microenterprise are thus governed by the interests of the perceiver, and upper and lower limits are usually set to such parameters as volume of labor, the amount of capital employed, or annual sales figures.

- The Guyana Manufacturing and Industrial Development Agency (Guymida) classifies a small enterprise as one with a maximum capital investment of US$200,000 but not less than US$5,000, whilst the Guyana Small Business Association (GBSA) defines it as one employing a maximum of 25 persons with annual sales of G$50,000 - G$5,000,000. The Deeds Registry sets an upper limit of 21 employees. Such an enterprise may be owned by a single proprietor, a partnership, a cooperative, or a private company.

- The obvious question is: Where do small producers of agricultural products fit in with these definitions? Where do women fit, when capital investment in small agroenterprises could be as low as US$1,000?

- It is against this background that a proposal is made for the assessment of small/microenterprises in Guyana and, based on its findings, that such enterprises be defined in order to allow those involved to benefit from training, marketing, fiscal incentives, financing, and developmental programs.

Specific objectives

- To produce a policy paper on micro- and small-scale enterprises with clear definitions.

- To ensure that women who operate small enterprises benefit from programs and policies on small/microenterprises.

- To reduce restrictions in the production of local agroprocessed goods by developing a system that allows small-scale operators to legally access credit and other forms of financial assistance.

- To improve the quantity/quality of output and the standard of living of women in agriculture and their families.

Expected outputs

- The institutionalization of small and micro-enterprises in agriculture will have a direct impact on the operational standards of such businesses.

- It will also assist in increasing the total agricultural output.

Activities to be executed

- In defining small and micro-enterprises, a fixed base should be established. It is important that a distinction be made between small and microenterprises in agriculture. Such a definition should consider the following:

  a. the number of persons employed by the business,

  b. the maximum capital investment (equity),

  c. the type of business.

- After defining the two groups of enterprises, a register of businesses should be compiled by the Deeds Registry and classified according to the following:

  a. the size of businesses (small and micro),

  b. the type of business,

  c. the economic sector.

- The Ministry of Finance and other policy institutions will then have a guideline for allocating fiscal incentives and other concessions.

- The lending approaches and policies of public institutions should be set in accordance with the guidelines of enterprise definitions.

- Market information should be disseminated on the basis of enterprise definitions.

- Research should also be approached on a similar basis.

- Given the above guidelines, a policy document on micro- and small-enterprise development should be formulated.

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# PROGRAM FOR THE ANALYSIS OF AGRICULTURAL POLICIES VIS-A-VIS RURAL WOMEN FOOD PRODUCERS

The Program for the Analysis of Agricultural Policies vis-à-vis Rural Women Food Producers, implemented by the Inter-American Institute for Cooperation on Agriculture (IICA) and financed by the Inter-American Development Bank (IDB), was conducted in 18 Latin American and Caribbean countries. The first phase of the Program was implemented in six Central American countries and the results published in the book *Mujeres de Maíz*. At the request of First Ladies attending the Summit of First Ladies on the Economic Advancement of Rural Women, held in Geneva, Switzerland in February 1992, a second phase was developed and the Program extended to include the Andean Region, the Southern Cone and the Caribbean.

This joint IICA/IDB Program has generated a large quantity of information on rural women, particularly with respect to their role as food producers. Findings are presented in 48 working documents and three books, and should be of particular utility to those formulating institutional programs and working strategies in agriculture and rural development.

The first section of this book includes a summary of the findings from the 18 Latin American and Caribbean countries participant in the Program and provides an overview of regional trends and the situation of rural women as food producers at an important time in the hemisphere. The second section presents a summary and comparative analysis, as well as the conclusions, recommendations and proposals of the studies conducted in the Caribbean Region. A similar presentation of the results from the Andean Region and the Southern Cone are presented in the book *Productoras Agropecuarias en América del Sur.*

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