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Centro Interamericano de
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17 OCT 1988

IICA — CIDIA

THE JAMAICAN SMALL-SCALE FARMER

An Annotated Bibliography

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OFFICE IN JAMAICA
1988

The Inter-American Institute for Cooperation on Agriculture (IICA) is the specialized agency for agriculture of the Inter-American system. The Institute was founded on October 7, 1942 when the Council of Directors of the Pan American Union approved the creation of the Inter-American Institute for Agricultural Sciences.

IICA was founded as an institution for agricultural research and graduate training in tropical agriculture. In response to changing needs in the hemisphere, the Institute gradually evolved into an agency for technical cooperation and institutional strengthening in the field of agriculture. These changes were officially recognized through the ratification of a new Convention on December 8, 1980. The Institute's purposes under the new Convention are to encourage, promote and support cooperation among the 29 Member States, to bring about agricultural development and rural well-being.

With its broader and more flexible mandate and a new structure to facilitate direct participation by the Member States in activities of the Inter-American Board of Agriculture and the Executive Committee, the Institute now has a geographic reach that allows it to respond to needs for technical cooperation in all of its Member States.

The contributions provided by the Member States and the ties IICA maintains with its twelve observer countries and numerous international organizations provide the Institute with channels to direct its human and financial resources in support of agricultural development throughout the Americas.

The 1987-1991 Medium Term Plan, the policy document that sets IICA's priorities, stresses the reactivation of the agricultural sector as the key to economic growth. In support of this policy, the Institute is placing special emphasis on the support and promotion of actions to modernize agricultural technology and strengthen the processes of regional and subregional integration.

In order to attain these goals, the Institute is concentrating its actions on the following five programs: Agrarian Policy Analysis and Planning; Technology Generation and Transfer; Organization and Management for Rural Development; Marketing and Agroindustry; and Animal Health and Plant Protection.

These fields of action reflect the needs and priorities established by the Member States and delimit the areas in which IICA concentrates its efforts and technical capacity. They are the focus of IICA's human and financial resource allocations and shape its relationship with other international organizations.

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Miscellaneous Publication Series: No. A2/JM – 88-003

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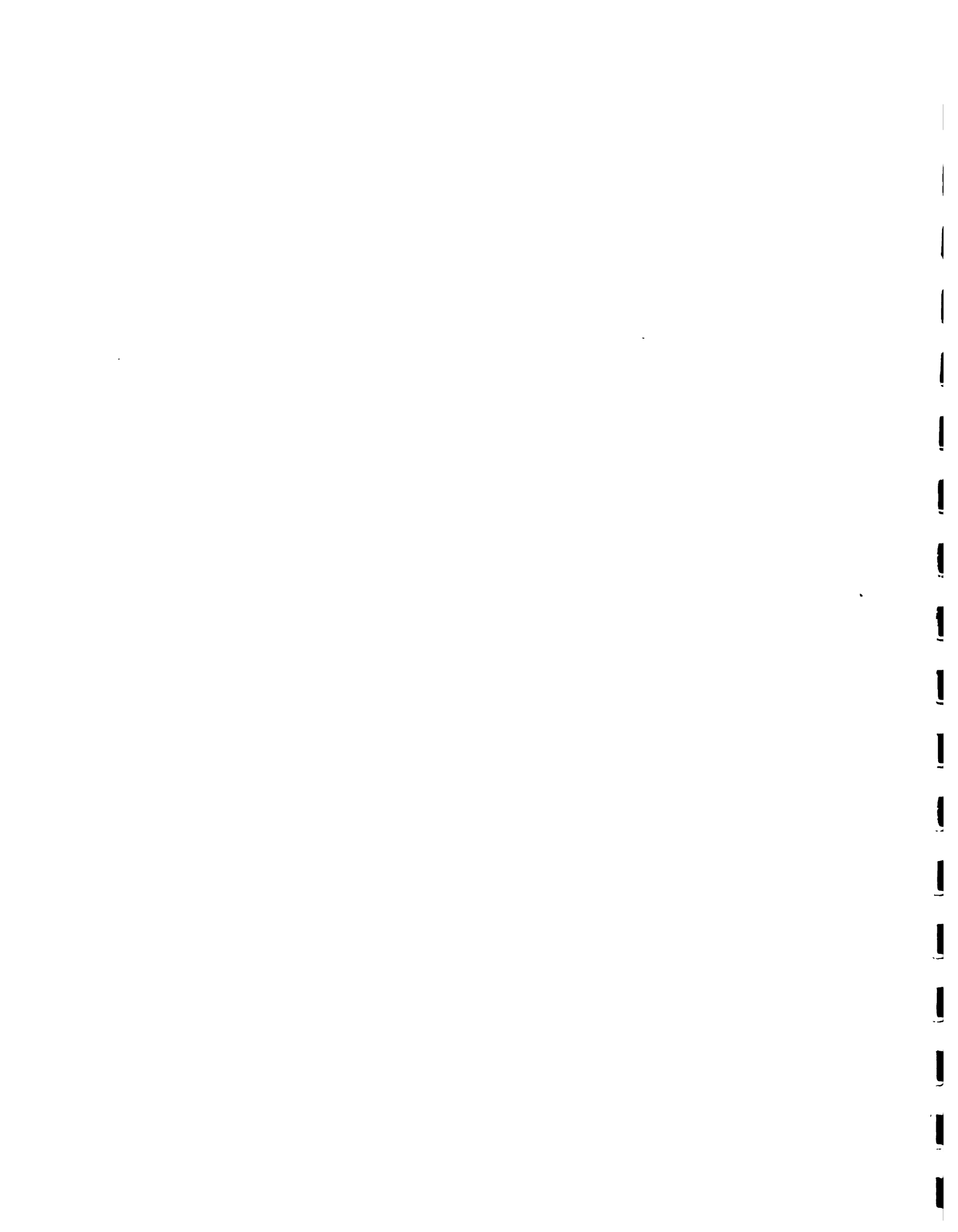
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Table of Contents

Introduction	1
Methodology and Sources	2
Library Directory	2
Section 1: Economics	3 - 26
Section 2: Agronomics	26 - 33
Section 3: Rural Women, Farm Families and Development	34 - 38
Section 4: Rural Sociology	39 - 42
Section 5: Rural Poverty	43 - 45
List of Acronyms	46
Author Index	47 - 48



Introduction

Concerned for the need to generate information as it relates to the agricultural sector of Jamaica, in particular the economic aspects regarding the small-scale farmer, the Inter-American Institute for Cooperation on Agriculture in Jamaica has developed an annotated bibliography with the purpose of assisting researchers, professionals, Government, non-Government and International Organisations to have access to sources of information regarding the problems affecting the small-scale farmer in Jamaica.

Tomas Mulleady, Agricultural Economist, and Rodney Rieks, a Peace Corps Volunteer assigned to the IICA office in Jamaica, had the main responsibility for collecting the information. The bibliography is arranged in five broad categories: economics; agronomics; rural women, farm families and development; rural sociology; and rural poverty. The documents in each category are annotated alphabetically according to the title of the document; to facilitate use of the bibliography, an author index is also included. The library in Kingston where the document was first located is indicated in parenthesis below the document identification number. Our literature search in Jamaica was limited to nine libraries (see directory for location of libraries); when the source is not mentioned, it means that in our limited search we did not locate the document. Copies of most documents may be obtained through the publisher or through the assistance of CIDIA, IICA Head Office in San Jose, Costa Rica.

We are hopeful this publication accomplishes its purpose of providing information for the development of policies, projects and programmes to increase the income and improve the well-being of a large sector of the rural population in Jamaica.



Jan Hurwitch-MacDonald
Representative, IICA Office in Jamaica

Methodology and Sources

This annotated bibliography on Jamaican small-scale farmers was prepared by the IICA office in Jamaica with the collaboration of IICA's Inter-American Agricultural Documentation and Information Center (CIDIA). The information is based on the data bases of CAB abstracts of "CAB International"; AGRICOLA of "Science and Education Administration Technical Information Systems" (SEA/TIS); USDA and the World Agricultural Information System (AGRIS) developed by the United Nations Food and Agriculture Organization (FAO).

Most of the documents annotated have a code listed above the author and title. This code signifies that the document is on data base at one of the information services listed above. Codes that are solely numerical are on data base at CAB International. Numerical codes for documents that are preceded by "AGR" are on data base at AGRIS. And finally, numerical codes that are followed by "Holding Library: AGL" are on data base at AGRICOLA.

Library Directory

CARDI - UWI, Mona, Kingston 7	SRC - Hope Gardens, Kingston 6
FAO - 60 Knutsford Blvd., Kingston 10	UNESCO - 25 Dominica Drive, Kingston 5
IICA - 11 Fairway Avenue, Kingston 5	USAID - Oxford & Belmont Road, Kingston 5
ISER - UWI, Mona, Kingston 7	UWI - Mona, Kingston 7
MINAG - Hope Gardens, Kingston 6	

1. ECONOMICS

- 1426270 OR024-07324; 2R005-02745
1.1 GRAHAM, D.H.; BOURNE, C. 1980. **Agricultural credit and rural progress in Jamaica.** Ohio State University, Department of Agricultural Economics and Rural Sociology (USA). (No. 752):27 p.

This paper examines the national network of agricultural credit in Jamaica, its growth and performance and institutional change. The questions of arrears and institutional viability are discussed. The struggle between a planners' and a bankers' perspective on agricultural credit strategies has not been resolved; the Jamaican Development Bank has not performed well, and public sector credit delivery to small farmers has been difficult. Alternative policies are considered, such as a package of agricultural policies that distributed inputs in kind and subsidized cost and promoted minimum price programmes and marketing arrangements that would reduce the risk of income variance.

- 0519165 OR018-01277
1.2 JOHNSON, I.E.; STRACHAN, M. 1974. **Agricultural development in Jamaica.** Proceedings of the ninth West Indies agricultural economics conference held at the Pegasus Hotel, New Kingston, Jamaica April 3rd-6th, 1974 and at the Jamaica School of Agriculture, Twickenham Park April 7th-10th, 1974. Kingston, MINAG. 19 p.
(MINAG)*

The paper analyzes the structure of Jamaican agriculture, examines the various sub-sectors, including land use, land tenure and land distribution, and assesses where possible the problems and needs of the sector. Jamaican agriculture is divided between two sub-sectors, plantation or export agriculture and the small farm sector. Jamaica has approximately 1-2 million acres of land suitable for the cultivation of crops including pasture, and an additional 462,000 acres suitable for tree crop cultivation. Most of the land in agriculture is owned and operated on a free-hold basis.

*The source where the document was first located is indicated in parenthesis below the document identification number. However, the document may be located in other libraries.

Since 1960 much consideration has been given to the development of more meaningful settlement programmes. The Five-Year Independence Plan (1963-1968) for Jamaica included provision for land reform. It indicated that in this context land reform implied the settlement of farmers on small-sized farms of 5-14 acres and on medium-sized ones of 15-30, some of the latter to be used for establishing small-size dairy farms. Land settlement in so far as it relates to a project managed by the private sector has neither been so extensive nor as precisely determined as that which is operated by government. Tenant farming in the private sector has been confined largely to that carried out on bauxite lands, greater use needs to be made of the total resources, land and people. Emphasis should be placed on measures for achieving a more equitable pattern of land distribution and there should be a more rational and intensive pattern of land use.

- 1417452 OR024-00490
1.3 HOPE, K.R. 1981. **Agriculture and economic development in the Caribbean.** Daemen College, Economics and Finance Department (USA). 6(4):253-265.

The article examines the role of agriculture in the economic development of the more developed Caribbean countries - Barbados, Guyana, Jamaica, and Trinidad and Tobago. The agricultural sector's contribution to the economy has declined in the past two decades. As a result, the sector has not generated sufficient employment or foreign exchange earnings. This has meant that the industrial sector has not been able to sustain development.

- 0146522 OR015-03648
1.4 (UWI) EDWARDS, D.T. 1972. **The development of small scale farming: two cases from the Commonwealth Caribbean.** Caribbean Quarterly (JA). 18(1):59-71.

Jamaican small-scale farming is first analyzed. This form of farming has responded very little to efforts made by the government to improve its situation. Market gardening in Trinidad is then studied showing how production increased in the face of intense competition between farmers without government backing.

- 0273301 OR027-00833
1.5 DEMAR, M. 1984. **Domestic food systems and the new internationalization of national economies: the cases of Jamaica, the Dominican Republic, and Trinidad and Tobago.** Woodrow Wilson International Center for Scholars (USA). (No. 142):60 p.

Despite efforts aimed at agricultural development in many Caribbean countries, malnutrition remains a major problem in the region and food imports have risen steadily. Similarly, there has been a transformation of the international economic system such that national economies have increasingly been integrated into the international economy. Many productive decisions which previously responded to factors at the national or lower levels are now responding to factors at the global level, even when transnational capital is not directly involved. At the same time, the internationalization of economies which were already substantially integrated into the international economy, such as those of the Caribbean, has undergone a qualitative change. A 'new international division of labour' has changed the role of many underdeveloped countries from that of being producers of primary products, integrated into the international economy solely through commodity trade, to being new locations of production for international capital. The paper examines the evidence of this transformation of the international economic system as it is found specifically in the food systems of Jamaica, the Dominican Republic, and Trinidad and Tobago, with a view to future analyses of the impact of this transformation on Caribbean food imports and Caribbean malnutrition.

- 1419484 OR024-03303
1.6 SCHRODER, D.; WARNKEN, P.F. 1981. **Economic analysis of potential intercropping systems in Jamaica.** Missouri University, Department of Agricultural Economics (USA). 31(1):63-68.

The Allsides Project is one effort to increase Jamaica's capacity to feed its expanding population from its limited land resources. Much additional multiple-cropping research is required in the country, yet several of the intercropping systems examined show current potential for adoption by small farms in

Jamaica. If adopted by even a relatively small percentage of the 220,000 small farms, a considerable increase could be expected in aggregate food production, income and employment. Several advantages could also accrue to the individual producer.

0807135 0R020-05494

- 1.7 (UWI) SIMMS, E. A. 1977. **An economic analysis of factors affecting root crop production in Jamaica.** UWI, Department of Agricultural Extension (Trinidad).

Gives an analysis of factors affecting root crops between 1959 and 1972, using two periods - 1959 to 1969 and 1970 to 1972. Using supply response models estimates elasticity of output with respect to price (lagged) ranged between 1.83 for yams to 3.942 for dasheen.

- 1.8 (UWI) EDWARDS, D. 1961. **An economic study of small farming in Jamaica.** UWI, ISER (JA). 358 p.

The body of the study is divided into 4 parts: the background to the study, resource use and returns, possibilities of change, and conclusions. Part 2 examines the supply and use of resources, labour, management, land and capital, in the 87 farms studied; particular attention is given to restraints on the mobility of resources. There is also data on 27 of the 87 farms for which detailed information on **resources employed, production and its disposal, income and some forms of expenditure, are available week by week for a year.** The basic data on resources, production and output are presented and throw light on the combination and productivity of resources. Also discussed is the relationship of the farmer's circumstances to the amount of resources controlled. The last Chapter of Part 2 considers the households' incomes from farming and from other sources, and the level of living. The possibility of introducing changes in the 87 farms is examined in Part 3. Proposals for improving the farming systems and the farmers' reactions to the proposals are described. Material is drawn together and analysed in an attempt to explain the farmer's entrepreneurial behaviour. Part 4 gives a summary of the more important conclusions.

- 1572780 OR025-04875; 2R006-02076
1.9 SIMMS, E.; RANKINE, L.B. 1979. **Factors contributing**
(ISER) **to the growth and development of the root crop**
industry in Jamaica. UWI, ISER (JA).
28(4):31-68.

The study has two major aims: (1) to identify and analyze the factors which contributed to the rapid growth in production of root crops in Jamaica between 1970 and 1972; and (2) to provide a possible explanation for the failure of state assistance to achieve any significant growth in production between 1959 and 1969. The evidence presented demonstrates the possibilities that exist in the domestic agricultural sector, not only in Jamaica, but in many developing countries that have a significantly large but neglected small farm sector. It is shown that, given the right combination of assistance, i.e. credit, technical guidance, upgraded marketing systems and favourable prices, small farmers will respond and this response will manifest itself in a manner which is demonstrated in the report. It is concluded that these results offer policy guidelines for the effective development of the domestic agricultural sector. They appear to contain information that could be used to formulate small farm development strategies.

- 1.10 **FARM HOUSEHOLD credit behaviour: a case study of the**
(UWI) **Jamaican experience.** 1980. Ohio State
University, Department of Agricultural Economics
and Rural Sociology (USA); UWI, ISER (JA);
MINAG, Data Bank and Evaluation Unit (JA).
63 p.

This study presents survey, data analysis and discussion of farm production characteristics, marketing activities, formal and informal credit activity and off-farm employment. A discussion is included regarding the acres owned vs. acres cultivated issue.

- 0661727 OR019-05788
1. 11 ROBERTS, W. D. 1975. **Food marketing problems.**
(UWI) **Proceedings of the tenth West Indies
Agricultural Economics Conference. Volume I:
Plenary papers. Ed. by S.C. Birla.
Agricultural Marketing Corporation (JA);
Caribbean Agro-Economic Society in association
with UWI (Trinidad). 133-141.**

Marketing, like farming, covers a great many distinct, but related activities. Basically, it does two things: (1) it moves the product from the farmer to the consumer; (2) it returns money from the consumer through marketing channels back to the producer. The paper is confined mainly to the problems of food marketing in Jamaica, and particularly to events during the past 3 years. The role, functions and performance of the Agricultural Marketing Corporation (AMC) of Jamaica are examined. Attention is then turned to some of the problems which face marketing agencies in general, and the AMC in particular, and methods being used by the AMC in an endeavour to solve these problems are outlined. It is concluded that the challenges facing marketing agencies in the Caribbean are numerous though not insurmountable. They find themselves in an industry with thousands of small farmers working under difficult conditions. Within this framework the function of the marketing agency is to create the conditions necessary to bring about the economic transformation of the rural population by assisting in expanding production.

- 1420423 OR024-03775; 2R005-01394
1. 12 BOURNE C.; GRAHAM, D. H. 1980. **Funding and viability**
(ISER) **of rural development banks. UWI, ISER (JA);
Ohio State University, Department of
Agricultural Economics and Rural Sociology
(USA). 27 p.**

Governments of many lesser developed countries have established rural financial agencies as important agencies for accelerating agricultural development. The paper examines some funding problems experienced by these banks, arguing that their credit operations and long-run viability are affected by sources of loanable funds. Their basic funding problem is to secure that volume and composition of loanable funds consistent with efficient credit operations and

sustained growth of the financial institutions. Main sections discuss principal sources of funding, short-term implications, timepaths of inflows of loanable funds, and implications for longer run institutional growth. Three ways of optimizing funding arrangements are examined: deposits, bond issues and earmarked taxes. Main conclusions are (1) public sector rural development banks are heavily dependent on local governments and external agencies for their funding; (2) the influence of these two main sources may contribute to weak loan portfolio performance and overall financial viability; (3) none of the resultant portfolio decisions are necessarily consistent with allocative efficiency, distributional equity or higher levels of rural employment; (4) long run viability and growth are threatened by tendency of major resource inflows to diminish drastically after 10 years. Sources of funding needed to be broadened, with more dynamic resource inflows. Empirical reference is made to the Jamaican Development Bank.

✓
1.13
(IICA)

HELPING the small farmer. Proceedings of the nineteenth FAO regional conference for Latin America and the Caribbean. 1986. Rome, FAO. 21 p.

The contents of the document include five sections: (1) the small producer is defined and classified; (2) the small producers' importance is quantified by the size of the sector and the contribution to the economy and food production; (3) the main problems affecting the development of the small producer are listed; (4) a review of development policies and programmes (at national level and by FAO and other agencies); and (5) guidelines are offered for a strategy of action.

0402334 2R009-00450

1. 14

DURANT-GONZALEZ, V. 1985. **Higglering: rural women and the internal market system in Jamaica.** Rural development in the Caribbean. Ed. by P. I. Gomes. Georgia Institute of Technology, Department of Anthropology; Division of Social Sciences (USA). New York, St. Martin's Press. p. 103-122.

Higglering in Jamaica, or huckstering, its name in the Eastern Caribbean, is a highly visible manifestation of female participation in economic production throughout the English-speaking Caribbean. Female domination of the distribution of fresh farm products in the internal market system of Caribbean societies is somewhat paradoxical, for although it allows opportunities for women to combine economic and domestic roles, at the same time it competes with females participating in other areas of the labour force and in education. The aim of the paper is to demonstrate that higglering is a primary role of achievement for rural women. It provides opportunities for economic participation and self-fulfilment, and at the same time for conforming to the cultural expectation of childbearing and for meeting childcaring responsibilities. It also shows that higglering is an occupation that has effective methods of recruiting and training new members. The theoretical assertion is made that successful rural development is based on programmes and development models which accommodate the draw upon existing economic and social contributions of all segments of a population. This assertion stems from the fact that female participation, as marketeers, in the traditional sector of the economy historically has made and continues to make essential inputs into the economies of Caribbean countries. It also recognizes that much of the economic skill and knowledge which participants use in higglering is universal. It is suggested that this finding has important implications for planners of rural development. It suggests that higglers in the traditional sector have a potential, with their higglering skills, for easy integration into newly-created modern economic outlets. The paper documents anthropological fieldwork in a small farming community in the parish of St. Mary, Jamaica, in 1974/75.

- 0537624 OR029-00923
1. 15 DOUGLAS, C.D. 1986. **The impact of credit policies on small farm organisation and growth: a case study of Jamaican farmers.** University of New England, Department of Agricultural Economics and Business Management (USA). *Agricultural Economics Bulletin* (no. 31):232 p.

A dynamic recursive programming model of small farm household decision-making behaviour was formulated. The model was applied to mainly vegetable farms in the Bushy Park area of South-west St. Catherine. The recursive base model results suggest that the model provides a reasonably good description of the decision making behaviour of the small, low-resource farm households studied and it was used to investigate the likely impact of credit ceiling and interest rate policies. Conclusions indicate that the current credit ceiling of J\$50,000 is likely to result in inefficient resource allocation for farms of 9 acres (3.6 ha) and over, and that, prior to instituting interest rate reforms, policies directed towards controlling inflation and expenditure on improved technology or marketing, are likely to result in high payoffs.

- AGR85-064894
1. 16 ZENNY, F.B. 1984. **Integrated rural development and (FAO) agricultural marketing and credit, Jamaica.** Rome, FAO. 244 p.

- 0357323 OR027-05268; 2R008-02095
1. 17 BENJAMIN, M.P. 1985. **Investment projects in agriculture. Principles and case studies.** Rome, IFAD. 297 p.

The book's primary objective is to assist those concerned with both the study and practice of agricultural development in developing countries to design, prepare and implement agricultural projects. It provides an interdisciplinary approach to agricultural project development, underlining the importance of overcoming the previous single discipline (agricultural economics) emphasis. In Part I practical preparation of agricultural investment projects is illustrated, using case studies from Africa, Asia and Latin America. Part II develops a set of more theoretical principles that could be applied to project formulation, while Part III

covers the main considerations in project design and analysis. In Part IV, three detailed case studies discuss the factors involved in project formulation and the advantages to be derived from different kinds of agricultural development projects. These are: (1) the Funtua agricultural development project in Nigeria; (2) the Indonesia seeds project; and (3) an agricultural credit project in Jamaica.

1. 18 AGR86-059561
GRAHAM, D.H. 1980. **Issues surrounding the design and performance of small farmer credit programmes: a review of the Jamaican experience.** Ohio State University, Department of Agricultural Economics and Rural Sociology (USA). (No. 875):76-112.

This paper was presented at the Senior Management Workshop of the Caribbean Agricultural Credit Training Committee held November 17-20, 1980, at Georgetown, Guyana. The paper is organized into four sections. First, a brief overview is made of the performance of the economy during the seventies; second, the relative scope and role of the small farmer credit initiatives in the larger rural financial market setting is established; third, a specific analysis of the three major small farmer credit programs is offered; and finally a set of recommendations is made to restructure and revitalize the rural financial markets in Jamaica.

1. 19 0259587 0R016-03008
CRISP, R.E.; POPENOE, H. 1972. **Jamaica and Martinique: contrasting aspects of folk agriculture and non-folk agriculture.** The Hague; Paris, Mouton. p. 501-506.

The typical Jamaican rural peasant farms mainly for subsistence with the aim of security taking precedence over that of profit. In Martinique with a similar physical environment but different cultural patterns and colonial influences, peasant farmers practice commercial market oriented farming. Martinique is a model for countries seeking to develop their economy on an agrarian base.

- 1266394 OR023-07647; 2R004-02545
1.20 EDWARDS, M.R. 1980. **Jamaican higgler: their significance and potential.** University College of Swansea, Centre for Development Studies (UK). (No. 7):58 p.

The paper examines the significance of the petty trading business called "higglering" in Jamaica. It originated among plantation slaves, and women traders of African descent have continued to dominate this area. The market-place has become a locus of solidarity for this group, with the "higgler" as its focus. They are the most effective "informal sector" entrepreneurs in Jamaica, and more efficient than specialized middlemen or formal producing or marketing organizations. They provide vital services for other poor people in the traditional sector. With small farms, poor transport, sub-standard storage, dispersed and unpredictable demand, limited capital reserves, social stigma and political remoteness, the activities of higgler ensure the optimum allocative efficiency of scarce and abundant resources. Such skillful use of family ties or of the internal communication system are beyond the scope of marketing boards; nor can the latter ensure the access of the peasant farmer to the market or continued economic activity for so many women.

- 1.21 LOCHER, U. 1977. **The marketing of agricultural produce in Jamaica.** McGill University, (IICA) Department of Sociology (Canada). 78 p.

The paper is essentially a diagnostic study of agricultural marketing in Jamaica. It looks at production and marketing for export and for domestic use, but concentrates more on operations for the domestic elements of production and marketing. In this context, the higgler system is studied, the interdependence between different systems of marketing, and how these affect and condition, or are affected and conditioned by, the production systems which exist.

- 1576460 OR025-06993; 2R006-02859
1.22 MANHERTZ, H.G. 1981. **Mobilization of credit for agricultural development: a Jamaican perspective.** New York, United Nations. 205-212.

Savings for development: report of the International Symposium on the Mobilization of Personal Savings in Developing Countries, Kingston, Jamaica, 4-9 February, 1980. It has been demonstrated that the resource base for economic development in Jamaica is currently heavily dependent upon foreign capital, that gross domestic investments have been declining for the past 5 years; and further, that there is functional duplication and structural incompetence in the capital market, the correction of which represents a necessary condition for economic recovery and development. The desirability of focusing specifically on agricultural development as a priority was articulated against the background of the experiences of most developing countries. Attention is called to some of the peculiar problems that have to be resolved in any programme in order to improve the mobilization of agricultural credit, and the suggestion is made that such problems can best be dealt with through an integrated and streamlined institutional framework, which is outlined.

- 1.23 SALMON, M.G.; SRIVASTAVA, D.K. 1986. **Non-traditional agriculture in Jamaica: more questions than answers.** Proceedings of the seventeenth West Indies Agricultural Economics conference. UWI (JA). 92-107.
(IICA)

Section I deals with the problems and prospects in traditional agriculture. Section II looks at the transition from traditional to non-traditional agriculture and analyses the economic climate since 1980 and the concept of non-traditional agriculture. Section III gives a preliminary analysis of non-traditional agriculture and how it relates to land mobilisation and utilisation, what impact it has had on employment and foreign exchange, and what operational constraints exist regarding the growth of non-traditional agriculture. Finally the authors look at the questions of desirability and feasibility of non-traditional agriculture.

AGR82-808385

- 1.24 AITKEN-SOUX, P.; WAHAB, A.H.; JOHNSON, I.E. 1981.
(IICA) **Overview of agricultural development in Jamaica.**
Kingston, IICA. 43 p.

Provides information on the existing situation with regard to agricultural policy, resources, problems, technology, services, financing, past performance and the potential for development.

- 1.25 ✓ BRANN, H.I. 1979. On the efficiency of small-scale
(IICA) **farming and policy implications: a case study of Jamaica.** UWI (JA).

This study conducts a comprehensive, empirical analysis of the efficiency of small-scale farming in Jamaica and draws appropriate policy inferences based on the formulation of an appropriate 'package' of efficiency criteria. Output and input related efficiency criteria are used to analyse technical, economic and allocative efficiencies

0300164 OR027-02641

- 1.26 RAWLINS, G.W. 1984. **Patterns of resource use and levels of efficiency among Jamaican small farmers.** New York University (USA). 256 p.
(UWI)

The productivity levels of Jamaican peasant farming and alternative land use patterns are examined. Data were collected from farmers in an area served by an outreach project, the Second Integrated Rural Development Project (IRDPII), jointly sponsored by the Government of Jamaica and USAID. The data covered personal characteristics, income flows, resource use, and output. Participating farmers received frequent advice from extension and soil conservation officers and varying degrees of assistance in procuring input. A Cobb-Douglas production function was specified for participating and some non-participating farmers. Participating farmers, who used a higher proportion of modern inputs in their resource mix, did not exhibit as high a level of allocative inefficiency in the use of these inputs as did the non-participating farmers. The latter were more likely to over-use the input that did not require a specific cash expenditure, i.e., family labour. Among other findings were the following: constant returns to scale, the lack of the significance of tenure status in determining productivity,

and a negative relationship between farm size and the rate of land utilization. The IRDPII programme revealed serious flaws at both the design and implementation stages. The collapse of plantation agriculture and the disastrous experiment with the sugar cooperatives appeared to eliminate these as feasible alternatives to small farming. Operation Land Lease did however show considerable promise in the area of land redistribution.

- 0559293 OR029-02221
1.27 GAFAR, J. 1983. **The performance of agriculture in developing countries: Jamaica 1960-78.** Trinidad, Central Statistical Office. (No. 12):34-48.

The paper examines whether the performance of the agricultural sector of Jamaica, a small open economy, has met or fulfilled a number of stated objectives. It is shown that the agricultural sector grew sluggishly in the period under review (1960-78); that the economy was a net importer of food; that the agricultural trade balance has deteriorated; that the agricultural sector only absorbed a modest increase in the labour force; that export agriculture did not provide the dynamic for growth of agricultural output, and that food prices are an important determinant in the inflation rate. Several factors were responsible for this, including the unequal distribution of land holdings, low agricultural productivity, a high capital-output ratio in the agricultural sector; apparently no real capital formation in the agricultural sector; and a wide disparity between the earnings in the agricultural sector and the rest of the economy. In order to make agriculture a dynamic and viable sector certain policy measures emerge from the analysis. These include: (1) a removal of subsidies on essential imported food stuffs in order to stimulate domestic food production and reduce the dependence on food imports. In this regard over-valuation of the exchange rate should not be encouraged; (2) policies designed to ensure a greater flow of financial resources to the agricultural sector; (3) modification of the tax laws to allow imports of agricultural machinery and tools duty free. Depreciation allowances granted to firms in the manufacturing sector operating under the Import Substitution Programme should be extended to the agricultural

sector; (4) measures should be taken to improve agricultural productivity. In this regard, agricultural extension educational programmes have an important role to play, particularly in reference to cropping patterns, vigorous programme of land reform aimed at increasing economic efficiency; placing unutilized land in production; rationalizing the existing use of land; and increasing domestic food production.

0661461 OR019-05229

1.28
(UWI)

McINTOSH, C. E.; LIM CHOY, M. 1975. **The performance of selected agricultural marketing agencies.** UWI, Department of Agricultural Economics and Farm Management (Trinidad). (No. 11):102 p.

Since the introduction, within the past 15 years, of state-controlled marketing agencies in several Caribbean territories, there has been great concern regarding their influence on the improved efficiency of the marketing system and their impact on agricultural development. The study examines four major marketing agencies in the Region: namely, the Barbados Marketing Corporation (BMC) in Barbados, the Agricultural Marketing Corporation (AMC) in Jamaica, the St. Vincent Marketing Board (St. VMB) in St. Vincent and the Central Marketing Agency (CMA) in Trinidad and Tobago. The objectives were: (a) to trace the historical development of the marketing agencies and to compare their facilitating legislation; (b) to develop a scheme for assessing the performance of agricultural marketing agencies in the Region; (c) to describe and analyze the procurement and distribution policies and practices of the selected marketing agencies; and (d) to evaluate the performance of the agencies against the developed criteria. The traditional marketing system for agricultural products which centered around vendors at public and roadside markets or itinerant vendors and speculators was charged as being inefficient and acting as a constraint on the expansion of food production and supplies. The formation of marketing Departments within the Departments of Agriculture (except Barbados), which were the precursors of the present marketing agencies was an attempt to improve the marketing system. Their failures in many areas led to the development of statutory bodies - the marketing agencies, corporations or boards charged with the overall objective of correcting market inefficiencies.

AGR82-807840

- 1.29 (IICA) JOHNSON, I.E.; THOMPSON, S.; AITKEN-SOUX, P. 1981. **Policy and administrative aspects of the Land Development and Utilization Act 1966 in Jamaica.** Kingston, IICA. 56 p.

Given the fact that Jamaica has a high man to land ratio, it has forced the country to look at ways and means of using agricultural land more effectively. This problem has worsened rapidly through the effects of increasing population. The main purpose of the Act was to provide a disincentive for large land owners to keep arable land idle. The conditions include arrangements for assisting these land-owners to adopt proper land development practices, to make land available for farmers having little land or in the alternative to have government acquire the land for use by others.

- 1.30 (IICA) FARQUHARSON, N. 1978. **Production and marketing of dasheen from Allsides and the Christiana area of Jamaica.** Kingston, IICA. 34 p.

The study examines production, marketing, demand, transportation, storage, grading and potential demand for dasheen. Also studied, are proposals for improvement of the dasheen industry.

- 1.31 0176850 OR026-03404; OD046-04427
TABATABAI, H.; GLOMBITZA, K.F.; KOWOLL, P.; MACIOSZE, K.L.; OTHMER, R.; SIMONS, W. 1984. **Production and marketing of milk in the smallholder sector of the Western Region, Jamaica.** Technische Universitat (West Germany). (No. IV/41):134 p.

The book analyzes the present situation of smallholder dairy farming to identify the constraints on production and marketing and the potential for an increase in smallholders' contribution to domestic milk production. The analysis was based on a survey of four parishes in the Western Region of Jamaica (Hanover, St. James, Trelawny, Westmoreland) where 52 small dairy farmers were interviewed. Background information on the structure of the dairy industry was collected from various organizations and institutions. The results indicated that the favourable production

environment in terms of natural conditions, availability of well adapted animals, feed resources (pasture, agroindustrial byproducts and crop residues) and low degree of veterinary problems cannot be fully utilized because of the following constraints: artificial insemination facilities are poor; extension on dairy production is almost non-existent; there are few links between research and extension; poor access to credit; and a limited milk collecting system. It is concluded that unless the price policy for milk is changed, the development of the Jamaican dairy industry, which is beneficial to the small dairy farmers and the economy as a whole, will be caught in a vicious circle of decline.

- 1.32 McLEAN, C. 1979. **Production and marketing of**
(IICA) **peanuts.** Kingston, IICA. 37 p.

This publication presents a case study of local peanut production, agronomic and economic aspects, its potential for hillside production, and provides an input for further studies related to development of the peanut industry in Jamaica.

- 1.33 JOHNSON, J.S. 1980. **Production and marketing of red**
(IICA) **peas in the hilly areas of Jamaica.** Kingston, IICA. 39 p.

This publication presents agronomic and economic data on local peanut production, its potential for hillside expansion, and provides an input for further studies related to development of the red peas industry in Jamaica.

- 1.34 FARQUHARSON, N. 1978. **Production and marketing of**
(IICA) **yams in Allsides and Christiana.** Kingston, IICA. 95 p.

This is a case study of the production and marketing of yams in the main yam growing areas of Jamaica. The study looks at production, storage, transportation, demand, other elements of marketing, and at social organization. A field survey was carried out over a 4 week period, during which time information was collected from a wide cross-section of persons including farmers and distributors. Major

aspects treated in the study include the higgler system and the Agricultural Marketing Corporation, limitations to the production and marketing of yams, financing and economic data such as prices and incomes.

- 1097624 OR022-04478
1.35 PUSHPANGADAN, K. 1979. **Productivity, efficiency and (UWI) marketed surplus in Jamaican agriculture. Proceedings of the thirteenth West Indies Agricultural Economics Conference.** Ed. by G.O'G. Alleyne. UWI, Department of Agricultural Economics and Farm Management (Trinidad). 131-142.

A case study of Jamaica is directed towards the impact of a changed distribution of land on employment creation, income equality, and increased food production. Data are based on a study conducted by Edwards on small farming in Jamaica, and a report produced by the Department of Statistics on production costs and output in large and small-scale agriculture. Results indicate (1) marketed surplus as a proportion of total output increases with the size of the farm; (2) productivity per acre is inversely related to the size of farm. Neither the fertility based explanation has any validity for this inverse behaviour between output per acre and size of farm; (3) large farms save both capital and labour on a per acre basis; (4) the best efficient medium farm (100-499.9 acres) has the minimum labour-manager ratio, and the least efficient large farm (500 acres and over) has the highest labour-manager ratio; (5) efficiency index is significantly associated with labour-manager ratio in farms of 500 acres and over. Intensity of cultivation and the efficiency index are negatively correlated in 100-499.9 acres farms.

- 1578293 2R006-00313
1.36 GRAHAM, D.H.; BOURNE, C.; BEGASHAW, G. 1981. **Recent economic growth and rural financial (USAID) markets in Jamaica: analysis of performance, problems and recommendations.** Ohio State University, Department of Agricultural Economics and Rural Sociology (USA). 39 p.

Against a background analysis of the Jamaican economy's accelerating decline from 1965 to 1978, the paper studies the recent performance

of Jamaica's rural financial markets (RFM's). From 1970 to 1977, credit increased rapidly, 6.7 fold, in nominal terms, but real growth was only 2.6 fold. Most of the increase came from new programmes such as the Self-Supporting Farmer's Development Programme (SSFDP) and the Jamaican Development Bank (JDB) with the help of foreign funds as inflation eroded the credit base in older domestic sources such as the Agricultural Credit Board (ACB). This rapid increase in credit within a declining economy has led to delinquency and arrears which have compromised future access to foreign funding sources, and to negative real interest rates which have benefited large farmers while undermining the viability of the credit institutions themselves. More detailed analysis of the performance of the commercial banks, the overall main source of farm credit; the JDB, the major vehicle for official farm credit; and the three government programmes designed to provide small farmer credit (People's Cooperative Banks, the SSFDP, and the Crop Lien Program) confirm the above conclusions. Analysis of the impact of public financial policies on RFM's leads to the conclusions that government assistance has been irregular and has directly benefited only a narrow range of industries and that central banking policies have not succeeded in providing an adequate flow of private sector credit to agriculture. A final section discusses the main problems caused by the above factors: negative interest rates that benefit large farmers and penalize savers; inefficient use of credit and arrears by large farmers, due to lax loan administration; and high delinquency rates that threaten the viability of the small farmer credit programmes.

- 1423891 OR024-05369; 2R005-02111
1.37 ERICKSON, F; ERICKSON, E. 1980. A review of
(USAID) agricultural marketing in Jamaica. Washington
D.C., USAID. (No. 2):82 p.

The paper points out major issues and problems of agricultural marketing in Jamaica, especially as they relate to the income and livelihood of small farmers and marketeers. It focuses on domestic food marketing rather than on export crops. The first section introduces the marketing system in the perspective of the Jamaican agricultural economy. The second section reviews major recent studies of

marketing in Jamaica (and an appendix contains an annotated bibliography of all the studies reviewed). The third section examines major problems in domestic food marketing. The fourth analyzes whether marketing margins in Jamaica are excessive. Finally, constructive changes are proposed relating to institutional rationalization, market information, facilities and procedures, and co-operative marketing and input supply.

- 1099363 OR022-05250; 2R003-01739
1.38 MANHERTZ, H.G.; MARSTON, D. 1979. **Savings behaviour in the rural sector: the Jamaican experience.** Kingston, Ministry of Finance. 3(2):136-147.

Largely due to data constraints for the purposes of this paper the rural economy of Jamaica takes a very broad meaning to include all parishes outside the Kingston Metropolitan area. The assumption places constraints on the applicability of observations drawn from this paper as in Jamaica two very important 'enclaves' exist in the 'rural' areas, i.e. the bauxite and tourism industries which seriously distort the savings behaviour of the typical rural Jamaican economy which, apart from the towns and industrial pockets, comprises largely peasants, agricultural workers, tenant farmers, and more recently cooperative workers. The improved mobilization of rural savings is considered to be integral to the process of economic restructuring, development and growth in Jamaica. However, not only are there inefficiencies in the present arrangements to mobilise the rural surplus in the economy, but further and more fundamentally glaring structural and institutional problems exist in the agricultural sector which impede the potential surplus yet to be tapped. Solutions cannot and must not be seen, however, in the narrow light of only increasing the flow of rural financial savings per se. Restructuring the rural economy is a necessity which has far-reaching socio-economic and political implications, and cannot be affected in isolation from the rest of the economy. Such a programme of restructuring is taking place at present in Jamaica through comprehensive land reform, increased financial and material support for agricultural development, improved marketing arrangements, and the expansion of the principle of cooperative education. The introduction of

such special savings/credit programmes as the Farmers Savings Programme to service the agricultural sector is expected to further support the effectiveness of the savings mobilization programme in rural Jamaica.

- 0471478 OR028-04693; 2R009-01506
1.39 BIMS, H.J. **Small farm economizing: a symbolic view of Jamaica.** 1984. Indiana University, Department of Humanities and Social Sciences. 252 p.

This dissertation explores the relevance of ethnohistory to problems such as self-perception and attitudes toward productivity in some kinds of peasant sectors, and the significance of history to concepts, meanings and actions in general, based on a survey of rural Jamaicans. The hypothesis that 'free' farmers have more incentive than managed ones was borne out in observations of 219 farmers, incentives being quantified as labour investment, land use, and dollar earnings. The study further used interpretations of ethnohistory and individual life accounts in abstracting what appeared to be a symbol system (manhood, freedom, land) among large numbers of rural Jamaicans, and felt this system relevant to understanding patterned acts. It further used a more direct semantic probe. Conclusions were generalized to other peasant sectors which have known either formal slavery or other kinds of alienation of rights to land and perceived 'freedom'. It is concluded that supervision (in certain forms) may inhibit productivity in certain kinds of historical contexts.

- 0520098 OR018-02774
1.40 **SELF-SUPPORTING farmers development programme.**
(MINAG) 1975. Kingston, Jamaica Development Bank. Farmer (JA) 80(7):282-289.

The Self-Supporting Farmers' Development Programme was initiated in 1969 as a project of the (then) Ministry of Rural Land Development, aimed at raising the level of small-scale farming in Jamaica, by making available to farmers in the 5 to 25 acre group supervised credit for medium-long term agricultural development. The objectives of the Programme are: (1) to improve the economic and social standard of the beneficiary farm family by

lifting the net farm income to at least \$900 annually; and (2) to provide food for the nation by proper development of land resources. The financing and administration of the scheme are described and details are presented of its operation in tabular form.

- 1264696 OR023-05813; 2R004-01793
- 1.41 **SMALL FARMING in the less developed countries**
(UWI) of the Commonwealth Caribbean. 1980. Kingston, Weir's Agricultural Consulting Services, Ltd. 335 p.

This report is the outcome of a survey commissioned by the Caribbean Development Bank in July 1975 and updated in 1979 by the original consultants, Weir's Agricultural Consulting Services Limited. The consulting team consisted of C.C. Weir, Director of Weir's, and E. LeFrance, C. Bourne, and F. Nunes, from the University of the West Indies, Jamaica. The 1975 study had as its broad terms of reference the following: (i) preparation of Country Reports, involving compilation and interpretation of all available data on small farming and supporting institutions on a country basis; (ii) detailed field surveys in Dominica, St. Vincent and Montserrat, in order to provide an in-depth and current view of small farming in these territories; and (iii) evaluation of the Farm Improvement Credit Scheme of the Caribbean Development Bank. Following the publication of the 1975 Report, there were numerous requests by the regional organizations and educational institutions for copies to be used as teaching material. In response to this demand the CDB commissioned a further study with the following broad terms of reference: (a) to review and update all data contained in the 1976 Country Reports to December 1977 or June 1978. If the latter data was feasible and present statistics in one standard format throughout; (b) recognize the technical data presented in the original study and augment these after updating, with necessary charts, diagrams, histograms and photographs; and (c) present the data in the 1976 Country Reports after updating, in book form, including a new section presenting material aggregated from the various Country Reports in addition to the individual reports on each of the lesser developed countries. The individual Country Reports are abstracted separately.

0258894 OR027-00350; 2R008-00429
1.42 **BEGASHAW, G.; BOURNE, C.; GRAHAM, D.H.; HEFFERNAN,**
(ISER) **P.J.; NYANIN, O.O.; POLLARD, S.K. 1983.**
Special number: rural financial markets in
Jamaica. UWI, ISER (JA). 32(1):170.

This Special Number contains the following papers: a) **Structure and performance of Jamaican rural financial markets** (C. Bourne); b) **The determinants of credit use among small farmers in Jamaica** (P.J. Heffernan and S.K. Pollard), this study employs the technique of discriminate analysis to identify which characteristics of farm households and lenders influence participation in rural financial markets. The main characteristics identified are farm size, farm revenue, access to extension services, and the enterprise mix; c) **Agricultural productivity and credit use of small farmers in Jamaica** (S.K. Pollard and P.J. Heffernan), this paper, through survey results and function analyses, indicates over-utilization of labour, little formal credit activity, off-farm earnings as an important source of farm liquidity, and widespread savings activity among small farmers; d) **The crop lien programme: implications of a credit project transformed into an ad-hoc income transfer programme** (D.H. Graham and S.K. Pollard), this study assesses an attempt by the Jamaican government to use unsecured credit as an instrument for rapid expansion of domestic food crop production by small farmers. It is concluded that the production objective was not achieved, while substantial resource misallocation and serious inequity resulted; e) **Effects of subsidized credit on the size distribution of farm household incomes** (C. Bourne); f) **Lending costs, institutional viability and agricultural credit strategies in Jamaica** (O.O. Nyanin); g) **Evaluation of a supervised credit project in Jamaica** (G. Begashaw), this study investigates the impact of supervised credit on the economic situation and productivity of small farmers. Its principal conclusions are that farm level resource use, production, net worth, and productivity increased.

- 1.43 AITKEN-SOUX, P.; WAHAB, A.H.; JOHNSON, I.E. 1981.
(IICA) **Under-employment - its relation to the
agricultural sector and considerations for its
management.** Kingston, IICA. 18 p.

This publication presents an evaluation of the situation which exists in the Allsides, Trelawny project area. Although some statistics are available for calculating unemployment, it has not been possible to calculate under-employment with any degree of precision, largely due to the ineptness of the kinds of statistics often available. Under-employment is disguised by social systems which "protect" and "carry" the unemployed as under-employed. Especially is this the case on family agricultural farms. Under-employment is especially typical of the small farming systems which have an excess of labour and a shortage of land.

- AGR80-480470
1.44 **WORLD CONFERENCE on Agrarian Reform and rural**
(FAO) **development. Country review paper of Jamaica.**
1979. Rome, FAO. 33 p.

Gives information on land capability, farm size, resources, and employment in agriculture. Reviews land settlement from the period prior to 1895 and describes land reform programmes since 1972, including Project Land Lease providing Government land to farmers for tenant farming, and rural development projects. Discusses problems and outlines agricultural goals.

2. AGRONOMICS

- 86122539 86041671 Holding Library: AGL
2.1 DAISLEY, L.E.A.; JOHNSON, E.D.; FRANCIS, R.L. 1982.
(MINAG) **Aspects of the farming systems of southeast St. Elizabeth, Jamaica.** Turrialba, CATIE. 134-158.

Case Studies for a workshop: Research on Crop-Animal Systems, April 4-7, 1982 held in Turrialba, Costa Rica.

- 0257000 OR016-01826
2.2 SHENG, T.C. 1972. **Bench-terracing.** Journal of the
(SRC) Scientific Research Council of Jamaica (JA) 3(2):113-127.

The design, manual and mechanical construction, maintenance costs and benefits and other aspects of bench-terraces, in particular reverse bench-terraces, which are most suited for upland or tree crops in high rainfall regions, are dealt with. In densely populated regions, labour-intensive manual terracing programmes for small farmers or shifting cultivators are desirable to protect the land and improve agricultural production, providing at the same time for employment opportunities at low costs. Prerequisites for success are overall planning, individual treatment, demonstration plots, incentives and inducements during the period of terracing.

- 2.3 ALVIM, P.; TROUT, G.A. 1986. **Cacao production in Jamaica and its potential expansion in hillside farming.** Kingston, USAID. 44 p.
(IICA)

The overall purpose of this report is to examine the possibility of increasing cocoa production in Jamaica under a proposed programme for small hillside farmers, specially in the Rio Minho and Rio Cobre watersheds. An assessment is made of the present situation of cocoa farming in Jamaica including productivity constraints, market potential, cost of production, planting material, expansion and research need.

- 2.4 AGR84-077547
NAVARRO, L.A. 1980. **CATIE's small farmers oriented agricultural research effort in the Central American Isthmus.** Turrialba, CATIE. 22 p.

Consultation meeting on natural resources management for food and agricultural production through farming systems adapted to ecological and socio-economic conditions of small farmers in the Caribbean region.

- 2.5 AGR87-078647
(CARDI) GRANT, J.E. 1983. **Collection, storage and use of water by small farmers of Top Hill and Junction in the parish of St. Elizabeth, Jamaica.** Mona, CARDI. 5 p.

Rainfall in the area is low - with a mean of 1455mm per annum and 31 dry days. Water is collected in concrete or masonry tanks sited below ground level near to a paved catchment slope or building roof. The tanks are grooved and typically have a capacity of 45,000 litres. Catchments need to be of an adequate area; to fill a 45,000 litre tank approximately 55m square is required. Details of design and material, time and labour requirements for construction of tanks are given as well as an estimated cost at J\$100 per 1000 litres. Farmers are restricted to growing crops on a maximum area of 0.8 ha. Water is applied to individual plants by hand and crops mulched with dry grass to conserve water.

- 2.6 0384094 OR017-01289
KRAUSZ, J.P. 1974. **Competition among the root and cereal staples in tropical agricultural development.** Cornell University, Department of Agricultural Economics (USA). (No. 74-12):21 p.

The potentials for increasing food production of the staple tropical cereals (rice, maize, sorghum, millet) are compared with those of the tropical root crops (cassava, sweet potato, yam, coc-yam, Irish potato), with special reference to those areas where the two staple food groups are in competition. Central West Africa (Ghana and Nigeria) and the Caribbean (Trinidad and Jamaica) were chosen as areas of investigation wherever specific information was sought. The root crops tend to have slightly higher calorie yields per unit area per unit of time, and a

higher untapped improved breeding potential. With few exceptions, the root crops also have lower production costs, but the importance of this is largely related to farmers' returns which vary with the region under study. With increased income, root crops become less preferred, although the increase in urbanization perpetuates considerable demand for the generally low-cost root crops. Cereals are superior as regards storage and transport, although attempts at reducing the bulkiness of root crops and increasing their storage ability by processing and drying increase their competition with cereals. Alleged differences in protein content are greatly reduced if protein composition is viewed in terms of calories instead of weight. In very general terms, therefore, the root crops appear superior in terms of production costs and yielding ability, and considerable improvements are possible in technical performance, both in yields and storability and process.

- 2.7 WOO, B.-M.; WAHAB, A.H.; DEHANEY, J. 1981. Crop
(IICA) production on hillsides using non-bench-
terracing alternative measures for soil
conservation. Kingston, IICA. 27 p.

High density of farmers on steep hillsides has considerably increased soil erosion, largely due to the crops grown and the patterns of land use adopted. Under certain circumstances bench-terracing has proven to be successful in reducing erosion rates significantly while, at the same time, leading to increased production and productivity. The high subsidy (75%) paid by government led IICA to suggest studies of alternative soil conservation measures using similar cropping systems as those used at Allsides, Trelawny. The variables studied were production, soil loss and soil conservation costs.

- 2.8 AGR81-684149
(IICA) PAYNE, H. 1980. Cropping systems as they affect
human and natural resources utilization on small
farms on the hillsides of Jamaica. Kingston,
MINAG-IICA. 116-125.

Proceedings of a seminar on cropping systems:
coconuts, sugar cane, yam, vegetables, ginger,
Irish potato, and pulses.

- 2.9 HENRY, D.D.; GAYLE, J.R. 1981. **The culture of grafted pimento (a spice crop for hilly lands of Jamaica).** Kingston, IICA. 32 p.

Although the importance of pimento is well-known, its potential has not been realized. There is scope for expanding its use on hillside farms on a structured basis, using the modern methods of grafting for the duplication of cultivars. This presentation deals with the various factors and implications of such an approach for small farmers on hillside lands.

- 2.10 HARRISON, R.C.; McDONALD, E.; WAHAB, A.H. 1978. **Fertility assessment of newly terraced soils, using the micro-plot technique - the Allsides case study.** Kingston, IICA. 13 p.

This technique is regarded as a rapid method for ascertaining the fertility status of soils. It applies to a miniature field trial of factorial design and in this instance uses corn as the indicator crop. The technique provides useful comparative data in a short time, which facilitates approximate assessment of fertilizer needs. It serves as an indicator of specific problems for future detailed investigations. The method is rapid, simple and inexpensive in terms of total resources required. The main criterion used for assessment is that of the yield of fresh green material.

- 0149842 OR015-02982
2.11 RODRIQUEZ, D.W. 1971. **Ginger: a short economic history.** Kingston, MINAG. Commodity Bulletin No. 4. 36 p.

Ginger is the oldest crop in continuous production in Jamaica and is also an export crop of some importance. In the group of spices produced locally it ranks second to pimento, and provides an important source of income for the small farmers who are engaged in its production. Much of the crop is grown in areas of the Christiana Area Land Authority which have suitable soil and climatic conditions. These conditions and the particular skills employed in the preparation and marketing of the crop have all combined in making Jamaica's ginger the foremost in international trade.

- 2.12 HUTTON, D.G.; WAHAB, A.H.; DEHANEY, J. 1981.
(IICA) Investigating critical levels of dry rotting of yellow yam (*Dioscorea cayenensis*) planting material, the benefits of disinfecting the heads of *Pratylenchus coffeae*, and after-planting nematicide treatment. Kingston, IICA. 10 p.

This presentation reports on the results of tests carried out at Olive River, using chemical treatments for cultivars having different degrees of nematode infestation. Post harvest infestation is compared with that prior to planting, and the difference in damage is significant in every instance.

- 0114785 0Q026-06284
2.13 SEHGAL, S.M. 1969. Maize in Jamaica: present
(MINAG) status and future possibilities. Pioneer Hi-Bred Corn Company Research Station (JA). 357-360.

Proceedings of the Caribbean Food Crops Society meeting. Average yields of maize in Jamaica are about 12-15 bu/ac; a few progressive small farmers produce about 30 bu/ac and large growers produce about 60-65 bu/ac. Recommended cultural practices for maize production in Jamaica are outlined.

- 2.14 MONTAGUE-GORDON, E.; WAHAB, A.H.; DEHANEY, J.;
(IICA) WRIGHT, A.L. 1981. Performance of eleven varieties of dry beans (*Phaseolus vulgaris* L.) over two successive seasons on the hillsides of Jamaica. Kingston, IICA. 19 p.

Local production is considerably below the demand for dry beans, which form a very important element of the protein in the national diet. The importance of red beans, also known as red peas, and the inadequacy of the data available for successful production on hillsides have influenced the conduct of the research. The experimental results indicate a potential for increasing production through the adoption of appropriate technology.

- 2.15 (IICA) WRIGHT, A.L.; WAHAB, A.H.; MURRAY, H. 1979.
Performance of six varieties of red peas
(Phaseolus vulgaris L.) on a newly terraced
utisol in Jamaica. Kingston, IICA. 7 p.

Bench-terracing to the extent carried out in soil-conserving land on the Allsides, Trelawny project site seriously disturbs the soil structure and affects nutrient status and other conditions affecting plant growth. For this reason it became necessary at the outset of the Allsides project to determine not only the nutrient and fertility status of the terraced land but also the extent to which economic crops would grow satisfactorily in these considerably disturbed soils. Comparative performance of the 6 Phaseolus varieties is discussed.

- 2.16 (IICA) CAMPBELL, V.; WAHAB, A.H.; MURRAY, H. 1980.
Response of peanut (Arachis hypogaea L.) on a
newly terraced utisol in Jamaica. Kingston,
IICA. 18 p.

This study forms a part of the investigations carried out in relation to the Allsides Pilot Development Project. It is designed to provide additional technical information on the production of peanuts on hilly lands, specifically with respect to the nutrient requirements on newly terraced land.

- 2.17 (IICA) AGR81-651596
HENRY, L. 1980. Traditional systems in hillside
farming, upper Trelawny, Jamaica. Kingston,
IICA. 22 p.

Describes the current situation with regard to hillside farming in Jamaica. Land on the hillsides has been degraded through poor cultivation practices, unsound land use and lack of appropriate technology for farming on land of the slope and quality which hillside farmers are forced through circumstances to utilize. Underscored in the presentation is the importance of devising appropriate cropping systems for accommodation within the construct of the specific soil conservation measures applied.

0555780 OW025-02882

- 2.18 HAMMERTON, J.L. 1974. Weed control in peanuts in
(UWI) Jamaica. Abstracts 1974 Meeting, Science
Society of America. UWI (JA). 111 p.

In Jamaica, groundnuts are mainly grown by small farmers for local sale as confectionery. Cultural practices are often poor, weed control is frequently neglected and yields tend to be low. The main weed problems are annual and perennial grasses, annual brush, Euphorbia spp. and vines. Good control of weeds during the first 40 days of growth is necessary for good yields. Prometryne at 1.1 kg/ha, prometryne 0.6 kg + diphenamid 2.2 kg, metobromuron 2.2 kg and fluorodifen 3.3 kg proved generally satisfactory and resulted in good yields, while alachlor 1.8 kg, butralin 2.2 kg and AN 56 477 [N, N-di-(2-chloroethyl)-4-methyl-2, 6-dinitroaniline] warrant further evaluation.

- 2.19 HUTTON D.G.; WAHAB, A.H.; MURRAY, H. 1981. Yield
(IICA) response of yellow yam (*Dioscorea cayenensis*)
after disinfecting planting material of
Pratylenchus coffeae. Kingston, IICA. 8 p.

Several noxious nematodes affect yams in Jamaica but the *Pratylenchus coffeae* is the only one found infesting yellow yam. The paper describes comparative results of using oxamyl solution (2,000 ppm) or water at 45 degrees Celsius. Results show considerable potential for reducing the high losses to yam cultivars and edible tubers.

3. RURAL WOMEN, FARM FAMILIES, AND DEVELOPMENT

- 3.1 HENRY, D.D.; JOHNSON, I.E. 1979. **Agricultural extension service in Jamaica.** Kingston, IICA. 40 p.

This publication traces the development of agricultural extension services in Jamaica on a formal basis from 1895. Emphasis is placed on the functions and organizations of various agencies which have been involved in agricultural extension services, specifically the Jamaica Agricultural Society, Commodity Boards and the Ministry of Agriculture. Reference is also made regarding efforts to coordinate the activities of agencies and departments which are involved in agricultural extension to avoid duplication and overlapping. Also highlighted, is the aspect of liaison between extension services and research.

- 3.2 AGRICULTURAL, sociological, economic and health survey. 1981. Kingston, MINAG; Data Bank and Evaluation Unit. Kingston, Agro-Socio-Economic Ltd. 161 p.

The main purpose of this survey, carried out in specific areas of St. Thomas, was to provide information which will form the basis to evaluate a project at a later date. The survey contains a comprehensive body of socio-economic data on St. Thomas for planners, implementors and researchers in the fields of education, agriculture, health, family planning and the social services.

- 1265836 1R004-01223
3.3 MARCHIONE, T.J. 1981. **Child nutrition and dietary diversity within the family: a view from the Caribbean.** Case Western Reserve University, Department of Anthropology (USA). Food and Nutrition Bulletin 3(2):10-14.

This analysis of family food sharing habits, based mainly on farm family data from Jamaica, suggests that child nutrition is affected by intrafamilial food sharing. Share patterns are not readily responsive to nutrition education;

nutritional policies may have to focus more on increasing household access to resources than on "educational" attempts to persuade families to share food more equitably.

- 1421463 2R005-02217
3.4 CHANEY, E.M.; LEWIS, M.W. 1981. **Creating a "woman's component"**. A case study in rural Jamaica. Washington D.C., USAID. 36 p.
(USAID)

This case study documents the design and creation of a 'women's component' in the Second Integrated Rural Development Project at Christiana, Jamaica. The project was initiated in March 1979 among the women in the hillside farms in the project area and the goals and objectives of the women's unit were allowed to evolve, after many conversations with the farm women themselves. An account of the development of the project is presented under the headings: Invitation to the Office of Women in Development, USAID: "Help us do something for the women"; Phase I: Planning the women's component; Phase II: First steps in implementation; Phase III: Training course for extension officers. Accomplishments and assessment; Replication. A paper by the authors of the case study documents several of the ideas touched upon here: the role of women in agriculture in the Third World; the importance of smallholder agriculture in providing food for internal markets and generating some export earnings; the decline of the small farm sector as male migration accelerates in some world regions, and the increasing burdens on rural women as they try to carry on all the agricultural operations in addition to their work in the household.

- 1574218 2R006-01945
3.5 HOPE, K.R. 1982. **The employment problem, rural-urban migration and urbanisation in the Caribbean**. Daemen College, Business Administration Department (USA). Population Review 26(1/2):40-54.

The problem of employment and rural urban migration faced by the four Caribbean countries in this study (Barbados, Guyana, Jamaica, and Trinidad and Tobago) derived partly from their small size, partly from economic fragmentation, and partly from the fact that they have not had

well coordinated strategies for their economic development. There is need for a policy that takes into consideration a rural development strategy to reverse the flow of population out of the rural areas and stimulate the development of the more traditional agricultural sector. Rural development is taken to mean the far-reaching transformation of social and economic institutions, structures, relationships and processes in any rural area. All of the four countries do have some type of rural development programme. However, these programmes have met with marginal success. What is needed in the Caribbean is a rural development strategy which shows clear, annual and attainable targets for the share of public expenditure and public investment in agriculture, and for the share benefiting rural activities. This means that the strategy must be integrated into the development plans of the countries concerned. The policy must be one that promotes agricultural development in the Caribbean so as to sustain a rate of growth that allows for a balanced expansion of all parts of the economy, and which ensures that the pattern of agricultural growth is such as to make a strong and direct impact on rural poverty.

1575751 2R006-02357
3.6 JAMAICA - integrated rural development. 1982.
(USAID) Washington D.C., USAID.

The integrated rural development programme in the Pindars River and two meetings watershed areas of Jamaica project has five components: (1) Erosion control: (a) soil conservation measures, including terracing, ditching, waterways, and pastureland on 17,700 terracing acres; (b) forestation on 5000 acres; and (c) engineering works, including 22 miles of road construction/rehabilitation, and river and stream control (check dams and embankment protection). (2) Demonstration and training centres: five centres will be established to test and demonstrate the advantages of terraced farming and of multiple and continuous cropping techniques. 50 sub-centres, owned and operated by nearby farmers, will function as practical applications of the model demonstration centres. (3) Farming organizations and services: the Jamaican Agricultural Society (local farmer groups) the People's Cooperative Banks, and cooperatives in the project area will be

encouraged to provide improved credit, inputs, and marketing services to small farmers members. These organizations will be provided with technical assistance, training, and seed capital. (4) Agricultural extension: technical advisors will train agents and other Ministry of Agriculture personnel. The agents will promote the project's soil conservation measures and the services of the farmer organizations among area farmers. They will also advise farmers on appropriate cultivation techniques, and on the use of inputs, credit, and marketing services. (5) Rural infrastructure: the Government of Jamaica will finance rural electrification, potable water, and housing construction/refurbishing programmes in the project area. 30 Jamaicans will receive undergraduate and graduate training in various fields of agriculture. The project will be implemented by Jamaica's Ministry of Agriculture (Southern region) in conjunction with the Forestry Department and the Ministry of Public Works. Project activities will increase employment opportunities in the area.

- 3.7 AGR81-651866
(IICA) WINT, A.J. 1980. **The role of women in the development process (with special reference to the role of rural women).** Kingston, IICA. 92 p.

Provides a benchmark to assess womens' position in Jamaica. Aspects covered include: (1) the status of rural women; (2) enactments by the government designed to improve the rights of women; and (3) current programmes designed to improve the competence of women.

- 3.8 AGR83-936344
(MINAG) JONES, N.C. 1981. **Rural farm family development programme, April 1981 - March 1984.** Kingston, MINAG. 23 p.

AGR80-480470
3.9 RURAL DEVELOPMENT plan for Stanton Pioneer
(MINAG) farm. St. Thomas, Jamaica. 1979. Kingston,
MINAG; Rural Physical Planning Division. 48 p.

AGR82-808154
3.10 AITKEN-SOUX, P.; WAHAB, A.H.; JOHNSON, I.E.;
(IICA) SAHNEY, A.; MUNGUIA, N. 1980. Rural women
survey. Kingston, IICA. 327 p.

Survey of women on small-scale farms 0-5 acres.
Area of the Pilot Hillside Agricultural Project
(PHILAGRIP) in Southern Trelawny. The
presentation includes the methodology,
questionnaire, and a list of 312 tables
resulting from the tabulation of the data
obtained on living standards, labour, and
education.

4. RURAL SOCIOLOGY

1415712 2R005-00245

- 4.1 (IICA) GOLDSMITH, A. A.; BLUSTAIN, H. S. 1980. **Local organization and participation in integrated rural development in Jamaica.** Cornell University, Center for International Studies (USA). (No. 3):144 p.

Based on research during January-June 1979 in the Two Meetings and Pindars River watersheds, in Northern Manchester and Northern Clarendon respectively, the study aims to generate empirical information on local organizations in Jamaica's rural sector. The report reviews the background of the IRD Project in the context of Jamaica's rural problems, describes the economy and social structure of the two areas studied, examines structure and functions of formal local organizations and the level of farmer participation in them, as well as the degree of local involvement in various government services and farmers's attitudes to the IRD Project. Implications of the study for the rural development in Jamaica are discussed in the concluding chapter. Participant-observation, interviews and a survey covering 415 people (more than 8% of the farm families living in the research area) were used in data collection.

- 4.2 (UWI) CLARKE, E. 1957. **My mother who fathered me.** Surrey, Unwin Brothers Ltd. 227 p.

This book is based on a study of family life in rural Jamaica. A comparative study is made of three communities which reflect the different ways in which the rural community is organised and attempts to show how these different ways of life affect patterns of family life, the relationship between members of the family, and the composition of the household. The study demonstrates the influence that community organisation has on local patterns of family life. Such community variations show how misleading it is to assume an undifferentiated and uniform pattern of family organisation. Careful comparisons of varying community patterns of family organisation also show that simple economic differences are not themselves evident determinants.

- 4.3 LeFRANC, E.R.-M. 1986. **Small hillside farmers in Jamaica: a social analysis.** Kingston, USAID. 38 p.
(IICA)

This review of the available literature on small farm hillside agriculture, and the survey carried out discovered a generally receptive though cautious attitude toward the introduction of new ideas and practices. In particular, most farmers interviewed were in agreement with the idea of tree crops -cum- annuals as one way of simultaneously combating soil erosion and increasing farm incomes. It was found that this caution, as well as the incidence of idle land, was less influenced by factors such as age, education, and tenure than it was by simple financial and economic considerations. The importance of local participation in project planning and implementation and the necessity to expend time and effort in identifying the most appropriate ways of ensuring its social and economic acceptability is emphasized.

- 0228445 OR026-06230; 7K009-01731; 2R007-02312
4.4 RUSSELL, R.; BECKFORD, G. 1981. **The social and cultural factors involved in production by small farmers in Jamaica of potatoes and tomatoes and their marketing.** Paris, UNESCO. (No. RRD. 10): 102 p.
(IICA)

Two communities, potato farmers in Christiana, North Manchester, and tomato farmers in Bull Savannah, South St. Elizabeth, are studied, against the background of the general sugar plantation dominated agricultural structure of Jamaica. Detailed information was collected on household characteristics, farm characteristics (soil type, decision making, requirements/needs, land preparation, labour) planting, growing and caring for crops (labour, needs, planting materials), harvesting (labour, tools, needs, problems, yields, assistance), investment, marketing, income institutions, relations with the government extension service, infrastructure, and perceptions. The two communities are compared in terms of agricultural enterprises, climatic factors, topography and sociological factors. Farmers in Christiana are older, but farmers in both areas are experienced. Household size is larger than the national average, as is the level of unemployment. Approach to land preparation (mainly manual), planting, growing and caring

for crops were similar. Harvesting is very labour intensive. Climate greatly affects potato yields. New varieties and technology are generally welcomed. Investment levels are similar. Marketing is simple, with little attention to grading, packaging, storage, advertising or pricing. Recommendations concentrate on: adult literacy, improved extension, use of media, improved services, mechanized land preparation and cultivation, supervised credit, relevant research and a case study to identify levels of profitability.

- 87098469 87049472 Holding Library: AGL
4.5 RASHFORD, J.H. 1985. **Social impediments to the**
(MINAG) **cultivation of trees in Jamaica.** Bridgetown,
The Eastern Caribbean Center and the Caribbean
Food Crops Society. 249-250, 318, 329.

Proceedings of the Caribbean Food Crops Society:
20th annual meeting.

- 0132637 OR026-01217; 2R007-00310
4.6 SUB-REGIONAL workshop to consider the socio-
(UNESCO) **cultural bases for developing innovative**
policies and programmes relevant to Food
production and marketing by small farmers in
Latin America and the Caribbean. 1981. Paris,
UNESCO. 58 p.

These five papers include the interview questions and question areas used in the research, and summaries of the research results and recommendations for four country studies from Cuba, Surinam, Jamaica, and St. Lucia. The workshop was held in Bridgetown, Barbados from 10th to 18th August 1981. Areas covered included: household, housing and farm characteristics; the availability of services; detailed questions in the production process; storage and marketing practices; and recommendations ranged from collectivization through cooperative schemes and improvements in physical and cultural infrastructure to improve credit facilities.

0517168 OR015-00380

- 4.7 POLLOCK, N.J. 1972. **Women and the division of labour: a Jamaican example.** American Anthropologist (USA) 74(3):689-692.

Women's contribution to subsistence farming is considered. In Jamaica farming is one of the few occupations, but there is also a shortage of young men in most villages. Reliance on the production support of women is part of the life cycle of the co-residential family. A male member usually only returns to share economic responsibility when the couple reach middle age. This structural adjustment to the demographic imbalance is made possible by the ecology and nature of subsistence farming.

5. RURAL POVERTY

- 0808213 OR020-05614
5.1 WILLIAMS, A. N. 1976. **Agricultural reorganization and the economic development of the working class in Jamaica.** Cornell University (USA). 129 p.

The objective of this study is to develop guidelines for State policy and the minimum of working class action in the reorganization of the agricultural sector in Jamaica, consistent with the emergence of working class hegemony in a new social formation. State policy must be concerned with assisting the workers in satisfying their material needs, without reproducing the same conditions that lead to their servitude and oppression as a class. It is only within a new social formation that the problems of production can be seriously tackled. State policies must therefore be conditioned by the necessary provisions for the emergency of working class hegemony. The state must do so through (a) the promotion of social property and working class control of the basic production units in agriculture; (b) the reorganization of all state programmes to mobilize the workers; (c) the continuation of welfare programmes to ameliorate rural poverty.

- 0258199 OU055-00260
5.2 McLEOD, O.; McLEOD, J. C. 1984. **Food consumption and poverty in rural Jamaica. Ecology of Food and Nutrition.** UWI, ISER (JA). 14(4):297-306.
(UWI)

The relationship between food consumption and poverty is explored at an integrated rural development project site. Household food consumption was estimated by a 24-hour recall and socio-economic data were obtained by questionnaire. The sample of 110 household was randomly selected from three functionally defined strata: households operating 0-1 acre (landless), 1.1-3 acres (deficit) and 3.1-5.9 acres (subsistence). Protein-energy ratios were generally adequate, but energy intakes below 80 percent of recommended levels were observed in almost one-third of the households. Poverty conditions which differed in nature and intensity for the three strata were associated with deficits. Indications are that the solution is not a simple aggregate increase in

food production, but rather it must involve development activities which increase the effective demand of food among the deprived households.

- 0501785 1N046-07995
5.3 AINSWORTH, A.; WATERLOW, J.C. 1974. **Nutrition in**
(UWI) **Jamaica 1969-70.** UWI, Extra-Mural Department
(JA). 103 p.

This booklet consists of a report on nutritional status and the food supply situation in Jamaica in 1969, which was prepared for the Science Research Council by an expert committee. The chapters deal with nutritional status, food supplies and the pattern of food consumption, existing schemes for nutritional status, recent findings are reported on vital statistics, dietary surveys and anthropometric, biochemical and clinical measurements. These are derived mainly from surveys of children and the most comprehensive data are the anthropometric. The Jamaican diet is a varied one and the main problems are fluctuations in local production caused by erratic weather, and increases in the cost of important staple foods. Nutritional improvements in Jamaica can take place only alongside a general rise in the living standards and conditions of poor people.

- 0333252 2R008-01238
5.4 **REPORT OF the round table on rural poverty in**
(FAO) **Latin America and the Caribbean, Santiago,**
Chile, 7-9 May 1984. 1984. Rome, FAO. 155 p.

The objectives of the Round Table were: (1) to examine the structural context of rural poverty with particular reference to its determining factors, dimensions, characteristics and evolution; (2) to analyze the representative rural poverty groups; (3) to examine, the light of various significant national experiences, the salient characteristics of recent rural development, and exchange experiences on strategies and policies that have contributed to increasing or alleviating rural poverty situations; (4) to analyze the system of adoption of policy decisions relating to rural development and the participation therein of the rural population; (5) to exchange options on priority intervention areas with a view to alleviating or overcoming rural poverty, and to

obtain suggestions, criteria and ideas for the reorientation of related strategies and policies. The report presents a summary of the proceedings of the Round Table and its conclusions, as well as a summary of the contents of support documents:

(1) Characterization, dimensions and evolutions of rural poverty; (2) Elements of a strategy for rural poverty alleviation; and (3) The adoption of policy decisions for rural development.

Finally, summaries of country studies are presented for Chile, Colombia, Dominican Republic, Ecuador, Grenada, Haiti, Honduras, Jamaica, Mexico, Nicaragua, Panama, Paraguay, Peru, and Venezuela.

List of Acronyms

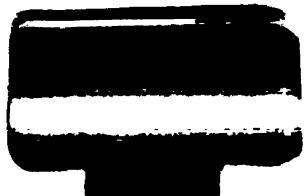
- CARDI** - Caribbean Agricultural Research and Development Institute
- CATIE** - Tropical Agriculture Research and Training Center
- FAO** - United Nations Food and Agriculture Organization
- IICA** - Inter-American Institute for Cooperation on Agriculture
- ISER** - Institute for Social and Economic Research
- MINAG** - Ministry of Agriculture
- SRC** - Scientific Research Council of Jamaica
- UNESCO** - United Nations Educational, Scientific and Cultural Organization
- USAID** - United States Agency for International Development
- UWI** - University of the West Indies

Author Index

1. AINSWORTH, A. 5.3
2. AITKEN-SOUX, P. 1.24, 1.29, 1.43, 3.10
3. ALVIM, P. 2.3
4. BECKFORD, G. 4.4
5. BEGASHAW, G. 1.36, 1.42
6. BENJAMIN, M.P. 1.17
7. BIMS, H.J. 1.39
8. BLUSTAIN, H.S. 4.1
9. BOURNE, C. 1.1, 1.12, 1.36, 1.42
10. BRANN, H.I. 1.25
11. CAMPBELL, V. 2.16
12. CHANEY, E.M. 3.4
13. CLARKE, E. 4.2
14. CRISP, R.E. 1.19
15. DAISLEY, L.E.A. 2.1
16. DEHANEY, J. 2.7, 2.12, 2.14
17. DEMAR, M. 1.5
18. DOUGLAS, C.D. 1.15
19. DURANT-GONZALEZ, V. 1.14
20. EDWARDS, D. 1.8
21. EDWARDS, D.T. 1.4
22. EDWARDS, M.R. 1.20
23. ERICKSON, E. 1.37
24. ERICKSON, F. 1.37
25. FARQUHARSON, N. 1.30, 1.34
26. FRANCIS, R.L. 2.1
27. GAFAR, J. 1.27
28. GAYLE, J.R. 2.9
29. GLOMBITZA, K.F. 1.31
30. GOLDSMITH, A.A. 4.1
31. GRAHAM, D.H. 1.1, 1.12, 1.18, 1.36, 1.42
32. GRANT, J.E. 2.5
33. HAMMERTON, J.L. 2.18
34. HARRISON, R.C. 2.10
35. HEFFERNAN, P.J. 1.42
36. HENRY, D.D. 2.9, 3.1
37. HENRY, L. 2.17
38. HOPE, K.R. 1.3, 3.5
39. HUTTON, D.G. 2.12, 2.19
40. JOHNSON, E.D. 2.1
41. JOHNSON, I.E. 1.2, 1.24, 1.29, 1.43, 3.1, 3.10
42. JOHNSON, J.S. 1.33
43. JONES, N.C. 3.8
44. KOWOLL, P. 1.31
45. KRAUSZ, J.P. 2.6
46. LeFRANC, E.R.-M. 4.3
47. LEWIS, M.W. 3.4

48. LIM CHOY, M. 1.28
49. LOCHER, U. 1.21
50. MACIOSZE, K.L. 1.31
51. MANHERTZ, H.G. 1.22, 1.38
52. MARCHIONE, T.J. 3.3
53. MARSTON, D. 1.38
54. McDONALD, E. 2.10
55. McINTOSH, C.E. 1.28
56. McLEAN, C. 1.32
57. McLEOD, J.C. 5.2
58. McLEOD, O. 5.2
59. MONTAGUE-GORDON, E. 2.14
60. MUNGUIA, N. 3.10
61. MURRAY, H. 2.15, 2.16, 2.19
62. NAVARRO, L.A. 2.4
63. NYANIN, O.O. 1.42
64. OTHMER, R. 1.31
65. PAYNE, H. 2.8
66. POLLARD, S.K. 1.42
67. POLLOCK, N.J. 4.7
68. POPENOE, H. 1.19
69. PUSHPANGADAN, K. 1.35
70. RANKINE, L.B. 1.9
71. RASHFORD, J.H. 4.5
72. RAWLINS, G.W. 1.26
73. ROBERTS, W.D. 1.11
74. RODRIQUEZ, D.W. 2.11
75. RUSSELL, R. 4.4
76. SALMON, M.G. 1.23
77. SAHNEY, A. 3.10
78. SCHRODER, D. 1.6
79. SEHGAL, S.M. 2.13
80. SHENG, T.C. 2.2
81. SIMMS, E. 1.9
82. SIMMS, E.A. 1.7
83. SIMONS, W. 1.31
84. SRIVASTAVA, D.K. 1.23
85. STRACHAN, M. 1.2
86. TABATABAI, H. 1.31
87. THOMPSON, S. 1.29
88. TROUT, G.A. 2.3
89. WAHAB, A.H. 1.24, 1.43, 2.7, 2.10, 2.12, 2.14,
2.15, 2.16, 2.19, 3.10
90. WARNKEN, P.F. 1.6
91. WATERLOW, J.C. 5.3
92. WILLIAMS, A.N. 5.1
93. WINT, A.J. 3.6
94. WOO, B.-M. 2.7
95. WRIGHT, A.L. 2.14, 2.15
96. ZENNY, F.B. 1.16





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**OFFICE IN JAMAICA, P.O. BOX 349, KINGSTON 6, JAMAICA TEL: 927-6462, 927-4837, 927-0632
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