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RESUME OF IICA'S PUBLICATIONS



by: Irving E. Johnson
Consultant

Kingston, Jamaica
September, 1992

IICA
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"WHAT IS IICA?"

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 of 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, facilitate and support cooperation among its 32 Member States, so as to better promote agricultural development and rural wellbeing.

With its broader and more flexible mandate and new structure to facilitate direct participation by the Member States in the activities of the Inter-American Board of Agriculture (IABA) 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 13 Permanent 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 1987-1993 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: Agricultural Policy Analysis and Planning; Technology Generation and Transfer; Organization and Management for Rural Development; Trade and Agroindustry; and Agricultural Health.

The Member States of IICA are: Antigua and Barbuda, Argentina, Barbados, Bolivia, Brazil, Canada, Chile, Colombia, Costa Rica, Dominica, the Dominican Republic, Ecuador, El Salvador, Grenada, Guatemala, Guyana, Haiti, Honduras, Jamaica, Mexico, Nicaragua, Panama, Paraguay, Peru, St Lucia, St Kitts and Nevis, St Vincent and the Grenadines, Suriname, Trinidad and Tobago, the United States of America, Uruguay and Venezuela. The Permanent Observer Countries of IICA are: Arab Republic of Egypt, Austria, Belgium, Federal Republic of Germany, France, Israel, Italy, Japan, Netherlands, Portugal, Republic of Korea, Romania and Spain.

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The views expressed in signed articles are those of the authors
and do not necessarily reflect those of the Inter-American
Institute for Cooperation on Agriculture

The Inter-American Institute for Cooperation on Agriculture (IICA) celebrates its Fiftieth Anniversary in October of this year throughout Latin America and the Caribbean. The IICA Office in Jamaica wishes to contribute to congratulations made to the Institute for its role in supporting the development of the agricultural systems over this half century.

The Inter-American Institute for Cooperation on Agriculture is the specialized agency for agriculture of the Inter-American system. It is an inter-governmental organization with full legal standing and has 32 Member States which are responsible for guiding, monitoring, and evaluating the Institute's operations.

From its founding to consolidation at the hemispheric level, IICA grew as an institution through seven stages, which represent landmarks in its on-going efforts to upgrade and strengthen its work to promote agricultural development throughout the Americas.

- Establishment (1942-1945)
- Consolidation (1946-1949)
- Decentralization (1950-1959)
- New Dimension (1960-1969)
- Humanistic Projection (1970-1980)
- Reaching Agreement (1981-1985)
- Hemispheric Consolidation and Projection Worldwide (1986-).

The Jamaica Office was established in 1977 during the fifth stage of the Institute's evolution, namely that of Humanistic Projection (1970-1980). At that stage, the major aspects of the Institute's modus operandi had been well established.

Within the economic environment in which the economies operate today and will continue in the future, agricultural modernization and diversification are recognized as fundamental elements in the strategies for economic reactivation and development of the Latin American and Caribbean countries. IICA's purpose is to encourage, promote and support the efforts of the Member States to achieve agricultural development and rural well-being.

Indeed, part of the efforts of IICA's co-operation for the agricultural modernization process in Jamaica, are largely reflected in the documentation prepared by this office since its founding.

As the Representative of the IICA Office in Jamaica, I am very pleased to contribute to the congratulations being made to the Institute on reaching this very important milestone in its existence, its Golden Anniversary.

Fifty years have passed since October 7, 1942. During this half century, IICA has progressed to several stages of institutional life and gained a wealth of experience throughout the Americas. For the IICA Office in Jamaica this experience, which is briefly presented in this document, has been the result of working jointly with the country in its efforts towards agricultural development.

I hope this document will be a valuable resource material as the country pursues agricultural development and rural well-being.

A handwritten signature in black ink, appearing to read 'A. Reyes Pacheco', with a large, sweeping flourish underneath.

A. Reyes Pacheco
Representative

RESUME OF IICA'S PUBLICATIONS
SINCE 1975

1. Publication No. I-5 AGRICULTURAL RESEARCH IN JAMAICA by G. Barker (Mrs.), A. Wahab, L.A. Bell, 81 pages including 10 Appendices. December 1977.

A report was presented at a Regional Technical Workshop on Agricultural Research Systems in the IICA/OAS Member Countries of the Antilles Zone held in Haiti, November 28 - December 2, 1977.

The Report covers:-

- . a summary of agricultural development policy which focuses on rural development planning;
- . the Research Policy within the Agricultural Sector, as well as Official Policy established by legislature and sectoral plans;
- . major elements of the National Agricultural Research System with respect to: agencies, sub-systems, objectives, organization and performance, structure, inter-agency relationships, planning and the resource base;
- . efficiency and effectiveness of research units; perspectives and suggestions for improving research agencies, measures for avoiding duplication of effort and resources, and the development of more relevant research where required.

2. Publication No. I-9 HILLSIDE FARMING TECHNOLOGY - INTENSIVE SHORT COURSE - Vols. I and II by MINAG and IICA - 470 pages, March, 1978.

The Government of Jamaica (GOJ) attaches much importance to domestic food crop production. Small farmers produce some 90% of these crops, utilizing lands which are 80% steep which require the application of special measures if they are to be intensively used.

A two weeks' seminar organized jointly by MINAG's Extension Division and IICA addressed specific problems associated with crop production on rugged hilly slopes on which small farmers produce most of their crops. Consideration was given to measures to be pursued in

meeting objectives for import substitution, increasing farm incomes, improving levels of nutrition and standard of living, while applying sound land-use practices in their production strategies.

3. Publication No. I-12 BRIEF OVERALL DIAGNOSIS OF HILLSIDE FARMING IN JAMAICA
by D. D. Henry - 58 pages, April, 1978.

The documentation covers such areas as:-

- Physiography, land and soil resources, soil types;
- Land distribution according to land capability classes and land use;
- Main farming systems, management practices - actual and recommended;
- Soil conservation measures;
- Major farm programmes and tenurial systems;
- Major services provided in relation to production technology, marketing systems, credit and social institutions.

4. Publication No. I-13 PRODUCTION AND MARKETING OF YAMS IN ALLSIDES AND CHRISTIANA
by Neville Farquharson. 95 pages, May 1978

A case study of the FSB-financed Hillside project for which many cropping systems were developed on bench-terraced land in the Allsides area of Trelawny. Information was collected from a wide cross-section of farmers and distributors over a 4-week period. Major aspects treated include:

- the Higglers Systems
- the Agricultural Marketing Corporation
- factors limiting production and marketing of yams; and
- financing and economic information.

5. Publication No. I-14 FERTILITY ASSESSMENT OF NEWLY TERRACED SOILS, USING THE MICRO-PLOT TECHNIQUE - THE ALLSIDES CASE
by R. C. Harrison, E. McDonald, and A. H. Wahab - 13 pages, August, 1978.

A joint MINAG/IICA effort.

The technique provides a rapid method for ascertaining the fertility status of soils. Corn (maize) was used as the indicator crop. The main criterion used was the

yield of fresh green material. It serves as an indicator of specific problems for future investigation, and particularly detailed studies which should be pursued to determine optimum levels of nutrients for specified crops on the Allsides terraces.

6. Publication No. I-15 COURSE IN THE PREPARATION AND EVALUATION OF AGRICULTURAL PROJECTS, Vol. I, 263 pages, Vol. II 353 pages, August to November, 1976, by IICA - IDB

Agreement No. ATN/TF - 1370 between IICA and the Inter-American Development Bank (signed in May 1975) made provision for the organization in member countries of a training programme in the Preparation and Evaluation of Agricultural Projects. In June 1976 MINAG requested and obtained such a programme.

The programme was carried out through theoretical courses and/or in-service training seminars designed to meet the major objectives of:

- training specialized personnel in the preparation and evaluation of agricultural projects; and
- promoting in member countries the development of expertise within institutions responsible for the elaboration, evaluation and execution of agricultural projects.

Duration of Project - August 20 - November 12, 1976.

Number of Participants: 23

Sponsoring agencies: IICA and the IDB

Lecturers were drawn from a wide field of experts from IICA and IDB, Jamaica (mainly Agricultural Planning Unit), UWI (Mona and St. Augustine) and the Economic Development Institute (EDI) of the World Bank. A Co-ordinating Committee headed by Nicot Julien of IICA/Jamaica directed the operation of the course.

Subject areas covered:

VOLUME I

- Agricultural Projects - Isidora Beraja
- Economic Efficiency and Cost Benefit - Lloyd Rankine
- Market Mechanism - Joseph Johnson
- Agricultural Marketing Systems - Jose Luis Pando
- Functional Framework of Land and Cattle Commercialization - Jose Luis Pando
- Economic Development - Irving Johnson

VOLUME II

- Elements for the Diagnosis of the Agricultural Sector - Roy Russell
- Costs and Financing of Projects - Arnaldo Veras
- Exercise in Cost and Financing - Headley Brown
- Financial, Economic and Social Evaluation - Juan Antonio Aguirre
- Farm Income and Products Analysis - Maxwell Brown
- Administration of Projects - William Bailey
- Technical Aspects of Agricultural Prospects - Rufo Bazan
- Project Management - Morris Solomon
- Report Preparation - Miguel Elvir

7. Publication No. I-16 PRODUCTION AND MARKETING OF DASHEEN FROM ALLSIDES AND THE CHRISTIANA AREA OF JAMAICA by Neville Farquharson, June, 1978.

A companion study to the yam study Publication No. I-13

The study examined production, marketing, transportation, storage and grading of dasheen, its potential demand and proposals for improvement in activities related to this crop.

8. Publication No. II-1 AGRICULTURAL DOCUMENTATION AND INFORMATION NETWORK IN JAMAICA by Arboleda Sepulveda of IICA - CIDIA, September, 1978.

In 1975 MINAG's Library began participation in the Inter-American Agricultural System (AGRINTER). This involved training courses for MINAG's Librarian in the

AGRINTER and AGRIS (Agricultural Information Service) methodology, and promotional activities arranged by the IICA/Jamaica office.

In June 1978 MINAG's Data Bank and Project Evaluation Division and the IICA Jamaica Office planned an activity with technical cooperation from CIDIA for the creation of a National Agriculture Information Service (NAIS). This included:

- i) GOJ's existing and possible increased involvement in improving agricultural information;
- ii) analysis of the flow of information:

- iii) proposals for creating an agricultural information network; and
- iv) suggestions for the creation of a NAIS within the framework of the National Development Plan.

The Publication sets out, inter alia,

- i) Objectives
- ii) Expected results and benefits to be derived
- iii) Basic activities
- iv) Organization of MINAG's Technical Services Unit
- v) Various services including inventorization of agricultural documents; computerization of information; promotion of the NAIS and development of training programmes.

9. Publication No. II-2 NATIONAL AGRICULTURAL INFORMATION SYSTEM - PROJECT PROFILE
by Victor Quiroga, September, 1978.

The preparation of this Project Profile took into consideration the principles, assumptions and concepts implied in Publication No. II-1.

The outline consists of:

- i) Introduction - including Frame of Reference and Scope
- ii) Objectives - General and Specific
- iii) Goals
- iv) Attainment of Objectives
- v) Description of the System
- vi) Stages of Execution of the Project
- vii) Benefits expected and beneficiaries
- viii) Participating Organizations
- ix) Activities
- x) Organization and Budget

10. Publication No. II-3 REVIEW OF LAND REFORM IN JAMAICA FOR THE PERIOD 1972-1978
by Joseph Johnson, September, 1978 (at request of IICA Jamaica Office).

The Publication introduced a number of new features, namely,

- i) Project Land Lease - Phases I, II and III
- ii) Sugar Workers' Co-operatives
- iii) First Rural Development Project

- iv) Integrated Rural Development Project
- v) Pioneer Farms

An important recommendation was made of the necessity for firmer measures to be pursued against persons who obtain land under reform programmes but are not producing any agricultural crops. A Recommendation was also made for improved marketing of domestic food crops.

11. Publication No. II-4 THE ABC OF VEGETABLE FARMING
by Neville Farquharson, February, 1979.

- Part I Botany and Soil Science - 116 pp
- II General Practices in Growing Vegetables-288 pp
- III Growing
- IV Vegetable Trials and Other Field Work for Students - 102 pp

The activity was conceived by IICA to prepare a textbook for use in High Schools of the English speaking Caribbean countries. The draft preparation would be presented to appropriate personnel in these countries for suggestions and modifications where appropriate.

IICA identified a person willing and able to undertake the assignments under specified conditions. Financial assistance was obtained from the Office of the Canadian High Commission in Jamaica and from the Royal Netherlands Embassy. The four (4) volumes (Parts I to IV) provide the draft presentation of the proposed book.

12. Publication No. II-5 ELEMENTS OF AN AGRICULTURAL MARKETING STRATEGY FOR JAMAICA
by Jerry La Gra, March, 1979.

This presentation considered:

- Traditional marketing systems in the Caribbean
- Marketing problems
- Policy decisions
- Elements of a Marketing Strategy
- Summary of some of IICA's Marketing Activities with specific reference to Barbados, Costa Rica, Colombia, Guyana, Haiti, Dominican Republic and Venezuela.

Suggestions were made for a Technical Co-operation Agreement between IICA and GOJ for improving the marketing services in Jamaica.

13. Publication II-6 AGRICULTURAL EXTENSION SERVICES IN JAMAICA, 40 pages,
by D.D. Henry, Consultant and I.E. Johnson, (IICA)
March 1979.

The publication traces the formal development of Agricultural Extension services in Jamaica since 1895. Emphasis is placed on the functions and organization of various agencies involved, specifically the Jamaica Agricultural Society, the Commodity Associations and the Ministry of Agriculture.

Reference is made to efforts to co-ordinate the activities of agencies and departments engaged in agricultural extension to avoid duplication and overlapping. The publication highlights the important aspect of liaison between extension services and research.

14. Publication III-1 WATERSHEDS OF JAMAICA AND CONSIDERATIONS FOR AN ORDINAL SCALE OF THEIR DEVELOPMENT, 75 pages
by H.R. Stennett, MINAG, July 1979.

Requested and sponsored by IICA Jamaica Office. The publication focuses on the division of the island into definable watersheds. It sets out the problems, features - physical, climatic, socio-economic - associated with these watersheds and makes proposals for providing more detailed information for the purpose of using slopes in humid tropical countries such as Jamaica for intensive agricultural production.

15. Publication No. III-2 HILLSIDE FARMING IN JAMAICA - PROCEEDINGS OF TRAINING SEMINAR,
by MINAG and IICA/Jamaica, December, 1978.

The main objective of the Seminar was to update local information and research in:

- Techniques related to food production on hilly lands;
- Soil loss using controlled conservation measures for hilly lands;
- Farming systems which have demonstrated a potential for increasing food (especially grain legumes and tree crops) production on hilly lands.

16. Publication No. III-3 PERFORMANCE OF SIX VARIETIES OF RED PEAS (PHASEOLUS VULGARIS) ON A NEWLY TERRACED ULTISOL IN JAMAICA by A. L. Wright, (MINAG), A. H. Wahab, (IICA), Howard Murray, (IICA), September 1979.

Bench-terracing disturbs soil structure considerably, affects nutrient status and other factors which facilitate optimum plant growth. It was therefore necessary to determine both the nutrient and fertility status of the newly terraced land, but also the extent to which economic crops would perform satisfactorily on these considerably disturbed soils.

17. Publication III-4 AGRO-SOCIO-ECONOMIC SAMPLE SURVEY OF ALLSIDES - TRELAWNY, JAMAICA by IICA/Jamaica Staff, September 1979.

Determined agronomic and socio-economic information on farming in the Allsides Pilot Project area, as a test of the socio-economic viability of the farming systems developed for adoption by farmers. MINAG provided assistance mainly through its Data Bank and Evaluation Division.

The Survey sample was drawn from the 233 farmers in the area. The sample was proportional, stratified and randomly selected. It consisted originally of a list of 70 farmers, which was reduced to 59, giving an adjusted sample size of 25% of the overall farm population.

18. Publication No. III-5 AN APPROACH TO AGRICULTURAL SETTLEMENT OF HILLY LANDS by MINAG and IICA/Jamaica, May, 1979.

Proceedings of Papers presented at Residential Training Course for Divisional and Area Extension Officers, May 7 - 18. 1979.

The scarcity of agricultural land and the necessity to use steep hillside lands for satisfying land hunger necessitated an examination and appraisal of the systems used in agricultural land settlement on hilly lands. The lectures covered topics in the areas of:

- Soils and Soil Conservation
- Rural Physical Planning (including sociological implications)
- Crops and Crop Nutrition

- Crop - Soil and Water Relations
- Cropping Systems
- Agricultural Extension

19. Publication No. III-6 TREE CROPS OF ECONOMIC IMPORTANCE TO HILLSIDE FARMERS IN JAMAICA (Seminar) by MINAG and IICA/Jamaica, June 19-21, 1979. Proceedings October, 1979.

Purpose of Seminar was to complement other information and to emphasize the use of tree crops as an extension method of using hillside lands economically.

20. Publication No. III-7 PRODUCTION AND MARKETING OF PEANUTS by Canute McLean, November, 1979.

Peanut was identified as one of the crops having a high production potential in the Allsides area. This publication presents a case study of local peanut production, its potential for hillside production and provides a useful input for further studies related to the development of the peanut industry in Jamaica.

21. Publication No. IV-1 PRODUCTION AND MARKETING OF RED PEAS IN THE HILLY AREAS OF JAMAICA by J. S. Johnson, January, 1980.

This crop is produced largely by small farmers on hilly lands, and is one of the favourite legumes used by the Jamaican population. The publication presents a case study of the local production of red peas and provides a useful input for further studies designed to improve the production profile of red peas (Phaseolus vulgaris).

22. Publication IV-2 RURAL WOMEN - AN ANNOTATED BIBLIOGRAPHY WITH SPECIAL REFERENCE TO JAMAICA by Lyn Snuffer, January, 1980.

In December 1975 the United Nations General Assembly by resolution established the period 1976-1985 as the Decade for Women. The period was to be devoted to effective and sustained national, regional and international action to implement the World Plan of Action. The Resolution called upon Governmental and Non-Governmental organizations to aid this activity.

Consequent on IICA's implementation in September 1979, of a new policy designed to involve and integrate women in a positive manner in rural development programmes of member countries, the Institutional Committee for Rural Women was created.

Jamaica was selected as the first country in the Caribbean for initiation of the programme, joining Honduras in Central America, Ecuador in the Andean Area of South America and Brazil in the South American - Atlantic Area.

In view of the scarcity of documentation on rural women this Annotated Bibliography was prepared.

23. Publication No. IV-3 RESPONSE OF PEANUT (Arachis Hypogaea) ON A NEWLY TERRACED ULTISOL IN JAMAICA by Vincent Campbell, Abdul Wahab, Howard Murray, January, 1980.

A joint MINAG/IICA (Jamaica) production which forms a part of the investigatory work undertaken in the Allsides Pilot Development Project. It is designed to provide additional information on the production of peanuts, specifically with respect to nutrient requirements on newly terraced lands.

24. Publication No. IV-4 AGRO-SOCIO-ECONOMIC SURVEY - PILOT HILLSIDE AGRICULTURAL PROJECT (PHILAGRIP) SOUTHERN TRELAWNY by P. Aitken, A. Wahab, I. Johnson and A. Sahney, February, 1980.

This publication presents information on: farming practices, agricultural technology, value orientations and economic performance profile of the beneficiaries of the proposed PILOT HILLSIDE AGRICULTURAL PROJECT

(PHILAGRIP) being prepared for financing by the Inter-American Development Bank (IDB).

The publication discusses the survey carried out and presents:

- The Methodology
- The Questionnaire
- Highlights of the Tables; and
- Tables (177 in number)

25. Publication No. IV-6 ALLSIDES FARMERS' PRE-COOPERATIVE A SOCIO-ECONOMIC ASSESSMENT
by Milton R. Wedderburn, March, 1980.

The inputs required for pursuing the technical package of practices for improving production performance are available at unit prices which are virtually prohibitive for farmers thereby limiting rates of adoption.

Farmers in assessing their own problems and requirements requested the creation of a farmers' co-operative. The Allsides Farmers' Pre-Cooperative was created as a prelude to the creation of a Co-operative. It was programmed to have field days, exchange ideas and to serve as an integrative institution for the benefit of farmers.

26. Publication No. IV-7 THE ROLE OF WOMEN IN THE DEVELOPMENT PROCESS
by Adele J. Wint, April, 1980.

The United Nations General Assembly, by resolution in December 1975 declared the period 1976-1985 as the "Decade for Women", from which ensued the creation of a World Plan of Action. (See Publication No. IV-2.) With a view to participating in the supportive policy declared by IICA in 1979 in initiating a Hemispherical Rural Women's Programme for the Region, Jamaica was made the base for that programme for the English-speaking Caribbean member countries of IICA. Note was taken of the fact that over some two or so decades Jamaican women had been contributing to a greater extent to the development processes of their country.

This publication provides a useful contribution to the benchmarks necessary for assessing the Jamaican position. It includes such important aspects as:

- the status of Jamaican women;
- enactments by GOJ designed to improve the rights of women; and
- current programmes designed to improve the competence of women.

27. Publication No. IV-8 THE CO-OPERATIVE INPUT IN THE DEVELOPMENT OF THE PILOT HILLSIDE AGRICULTURAL PROJECT (PHILAGRIP)
by M. R. Wedderburn, April, 1980.

This publication documented detailed considerations for

a proposal concerning the creation of an associative co-operative institution, designed to assist farmers in securing reduced input-costs for agricultural production.

28. Publication No. IV-9 RESEARCH AND DEVELOPMENT OF FRUIT TREES
Proceedings of a Seminar given jointly by
MINAG/IICA/CARDI. June, 1980.

The Seminar was specifically designed to pin-point economic benefits to be gained from efficient use of hilly land in producing fruit trees, while at the same time accommodating appropriate soil conservation and land use measures.

29. Publication No. IV-10 TRADITIONAL SYSTEMS IN HILLSIDE FARMING
by Lancelot Henry, June, 1980.

Presents bench-mark situations relating to hillside farming in Jamaica.

The presentation under-scores the importance of appropriate cropping systems within the construct of specific soil conservation measures applied. It emphasizes the extent to which land used for hillside farming has been degraded through inappropriate cultivation practices and unsound land-use.

30. Publication No. IV-11 PILOT HILLSIDE AGRICULTURAL PROJECT (PHILAGRIP) SOUTH TRELAWNY, JAMAICA - Project Document Vols. I, II, III, and IV
by MINAG, IICA/Jamaica, 1980.

Prepared by a team led by Dr. J. A. Aguirre (Chief of Project Preparation, IICA Headquarters) which included Drs. I. E. Johnson, P. Aitken-Soux, Abdul H. Wahab and Bo Myeong Woo; and Miss Lesly Puyol. Inputs were made by Dr. Roy Clifford, Dr. Ignacio Ansorena and Mr. Tsiao-Tsai Wang - Soil and Water Conservation Specialist.

Resulting from the IDB's continuing policy for assisting Jamaica's agricultural development, an "Agreement for Non-reimbursable Technical Cooperation" (Agreement # ATN/SF-1773-JA) was prepared and signed in May 1979 between GOJ and the IDB. The Agreement stipulating that

IICA be contracted to prepare the project, was signed between GOJ and IICA on January 7, 1980.

The Agreement required the IDB to provide US\$49,500 to be used by IICA in preparing the project document, and GOJ to provide a supporting sum equivalent to US\$18,200 to cover local and counterpart services.

The Project document would be designed to:

"analyze the viability of utilizing hillside lands by means of bench-terracing or other soil conservation techniques, as a tool for improving agricultural productivity and levels of employment in hillside rural areas of Jamaica".

This was expected to generate increased agricultural production and farm incomes, improve human nutrition and the standards of living of the farmers and their families. The main listed Project components were:

- formulation of an appropriate soil conservation programme for the project area;
- determination of appropriate food production systems for adoption by farmers;
- provision of technical assistance for project development, training of technicians and farmers; and
- creation of appropriate social organizations.

The IDB agreed to include in the financing package for project development:

- a grant for the soil conservation works; and
- a loan to cover production credit.

The Project indicated:

- costs
- technical inputs required
- farm models to be used
- social organizations to be created
- phasing of activities over the 3-year project implementation period agreed by IDB and GOJ.
- economic benefits and rates of return.

Due to the high cost of bench-terracing, after two years of project implementation, another objective was added, namely to "Identify Alternative and Less Costly Soil Conservation Measures". This work was started at Olive

River in Trelawny located about 6 miles from the Allsides project site.

The presentation outlines:

- Strategy for achieving the project objectives
- Experimental approach and methodology
- Principal results and accomplishments (including preliminary results of the Olive River Soil Loss Studies)
- Appropriate diagrams and isometric and sectional views.
- Input-Output data.

31. Publication No. IV-12 HIGHLIGHTS OF THE PILOT HILLSIDE AGRICULTURAL PROJECT AT ALLSIDES by A. Wahab, I. Johnson, P. Aitken-Soux, Bo-Myeong Woo, H. Murray and H. Stennett, July, 1980.

Earlier information obtained by MINAG (FAO assisted) in the Soil Studies Project at Cascade, Hanover, provided a basis for bench-terracing land at Allsides and determining the most appropriate cropping systems for bench-terraced soil conserved land.

The Case Study was a soil erosion-cum-conservation study, the main conclusions of which were:

- an average soil loss of 136 t/ha/yr (= 54 t/acre/y) and an accompanying reduction in soil fertility and productivity from unprotected yam plots having a slope of 17° .
- a comparable soil loss of 10 t/ha/yr (7.3 t/acre/yr) and accompanying improvement in soil fertility and productivity on bench-terraced plots.

GOJ embarked upon a soil conservation programme based on bench-terracing for slopes ranging between 7° and 25° , and requested IICA's assistance for determining the most appropriate cropping systems for newly-terraced lands at Allsides.

IICA's Simon Bolivar programme (FSB) provided external funding while GOJ provided in-kind financing for local inputs.

The Project (PHILAGRIP) was designed to determine, inter alia the potential of the improved cropping systems for:

- increasing levels of production and productivity;
- increasing farm incomes;
- enhancing nutritional profiles of farm families; and
- increasing opportunities for rural employment as a means for improving the quality of life of rural farm families.

32. Publication No. IV-13 BENCHMARK FOR A PROJECT PROFILE FOR DEVELOPING A PEANUT INDUSTRY IN JAMAICA by L. E. Johnson, A. Wahab, P. Aitken-Soux, H. Payne, July, 1980.

Information was presented which can be exploited for the development of a structured and expanded peanut industry for Jamaica.

The presentation was predicated on the fact that, to a great extent, the potential local use of the peanut has been unexploited.

Specifically, the information presented indicates that the growing of peanuts for agro-industry covering such uses as the production of oil, human food and animal feeds, as well as soaps and detergents, could expand local production of peanut considerably.

Main considerations include:

- Botanical, agronomic and ecological;
- Uses of the peanut;
- Current local industry development including: land availability and suitability, farming systems, production levels, production costs, problems and constraints;
- Demand for Peanut and Products: existing and potential demand for Jamaica; and regional demand for CARICOM;
- Organization of Farmers, Marketing, Co-operative aspects, Financing; and
- Rationale for the development of the local industry.

33. Publication No. IV-14 THE ALLSIDES POST PEASANTS by P. Aitken-Soux, A. Wahab, I Johnson, August, 1980.

This internal document presents a sociological assessment of the hillside small farmer, predicated on the paramountcy of social influence in economic planning for development.

It high-lighted value orientations of the people and their social interactions, based on information drawn largely from discussions with the people and from agro-socio-economic surveys carried out for the Allsides project area and also for the PHILAGRIP area.

An assessment was made of:

- the Allsides community;
- ethnic origins and some cultural characteristics;
- the family and other social institutions;
- social stratification and socialization of the individual;
- major social problems of farmers; and
- rural urbanization.

34. Publication No. IV-15 SALT EXTRACTION BY SOLAR ENERGY by Norma Mungia, Percy Aitken-Soux, Abdul Wahab, Irving Johnson, September 1980.

Background

Jamaica imports all salt (sodium chloride) used for cooking purposes, baking, food preservation and the manufacture of animal feeds.

Significant foreign exchange savings could be achieved through the local extraction of salt from sea-water using solar energy. This would contribute to the realization of GOJ's stated priorities for increasing food production through increased fish production and rural employment, utilizing salt produced by low capital intensive solar energy.

35. Publication No. IV-16 THE ALLSIDES PROJECT IN JAMAICA DEVELOPMENTAL POTENTIALS OF HILLSIDE AGRICULTURE by A. H. Wahab, P. Aitken-Soux, I. E. Johnson and H. Murray, September, 1980.

The Office of IICA in Jamaica was requested to participate in a Seminar on Rural Development held under the aegis of the Iowa State University, Ames, Iowa, USA, September 29 -October 3, 1980.

This publication is the paper presented at the Seminar. It used the Allsides Project as a case study, setting out inter alia, project description, objectives, strategies for implementation, results achieved and policy implications. This presentation was made by Dr. Abdul Wahab.

36. Publication No. IV-17 RURAL WOMEN SURVEY, Vols. I, II, III by P. Aitken, A. Wahab, I. Johnson, A. Sahni and N. Munquia, October, 1980. 327 pages.

In an earlier publication No. IV - 7, titled THE ROLE OF WOMEN IN THE DEVELOPMENT PROCESS, by Adele Wint, reference was made to the emphasis being placed on rural women's activities in Jamaica.

In the preparation of the Pilot Hillside Agricultural Project (PHILAGRIP), emphasis in the surveys undertaken was placed on women, some of them farmers in their own rights.

In this publication a survey was designed specifically for the purpose of obtaining information on the women in the household of farmers in the PHILAGRIP area of Southern Trelawny.

The presentation includes the methodology used, the questionnaire and a list of 312 Tables resulting from the tabulation of the data obtained.

37. Publication No. IV-18 ASSESSMENT OF EMPLOYMENT AMONG SMALLSCALE HILLSIDE FARMERS OF JAMAICA by P. Aitken-Soux, I. Johnson and A. Wahab, Nov. 1980.

Employment is a complex statistic, based as it is on criteria used in defining it for different situations.

This Publication presents an assessment of a relatively small area selected for development, but provides information which is likely to be similar to many situations in Jamaica.

38. Publication No. IV-19 PILOT HILLSIDE AGRICULTURAL PROJECT (PHILAGRIP) Final Project Document by I. Johnson, P. Aitken-Soux and A. Wahab, October, 1980

A revision of the original document which appeared in three (3) volumes, and a presentation of the project in a single volume having the same number of six (6) sections as the previous Publication No. IV-11.

39. Publication No. IV-20 IICA EVALUATION OF THE FIRST PHASE FSB ALLSIDES PROJECT (Internal Document) by various personnel as set out below. November 1980.

- i) Introduction by Jose Emilio Araujo, Director General.
- ii) Review of Project Design, by Heraclio Lombardo, Sede Central.
- iii) Analysis of Pertinency and Currency of Project Design - IICA Jamaica, by P. Aitken, A. Wahab and I. Johnson.
- iv) Analysis of Project Progress and Causal Factors by IICA/Jamaica - A. Wahab, P. Aitken, I Johnson.
- v) Preparation of Pertinent Conclusions and Recommendations by IICA/Headquarters - Hugo Cohan Rufo Bazan.

The Allsides Pilot Project resulting from an agreement between GOJ and IICA/Jamaica in December, 1976, was initiated in March 1977.

The Director General's Introduction included a comment that:

"The Project is producing technology which could be applied to other countries in the Antilles.... It is a methodological experience on administrative development in its different aspects of planning, direction, co-ordination and control of a successful project....an example of the potential of applied research for the agricultural sector and a better standard of living."

Pertinency and Currency of Project Objectives

Reference was made to:

- National Programmes and Institutions, as well as problems and resources;
- Widening scope of agencies which worked with IICA.

Comments were made on:

- Emphasized role of adaptive research in generating a body of knowledge for hillside agriculture.
- Pressing problems facing development of Jamaican agriculture as identified by GOJ and IICA/Jamaica Office. A major need was identified in the area of technology transfer.
- Agreement between staff of national institutions and of IICA/Jamaica Office on strategies for tackling national problems associated with the project.

IICA/Jamaica Office suggested that: "GOJ through its MINAG should -

declare each of the 33 Watershed Areas delineated by its Soil Conservation Division, as a Management Unit, as a more holistic approach in solving rural development problems on a national basis. Each Watershed Unit would become an integrated rural development project.

A suggested package of projects should include:

- A - Productive
- B - Social
- C - Institutional

Conclusions and Recommendations

The Allsides Pilot Project is one of IICA's most high-density projects, based on reports and opinions made per unit of personnel or of on-site costs. The Project's attained characteristics make it extremely useful for the purpose of deriving lessons for preparing other projects.

It was stated that:-

- (i) Although the project document does not clearly define the responsibilities of the national organizations and of IICA, these groups have maintained a clear mutual recognition of their respective areas of work.
- (ii) The strategy of institutional re-enforcement widely adopted in other FSB projects and used in this project has the joint efforts of national organizations.

Country Project

- (i) The GOJ/IICA/FSB project did not distinguish between the Country project and the IICA project, but there was evidence that Food Production and Rural Employment were primary objectives of both projects.
- (ii) GOJ was given responsibility for Extension Services and Soil Conservation, and their operations were worked out on an ad hoc basis.

Strategy

A Co-ordinating Committee, specifically created, proved to be a useful tool for developing the joint GOJ/IICA strategy in the absence of a pre-established strategy for meeting national commitments.

The Institution-building strategy pursued by the Project and the model used for the FSB project in Jamaica involved:

- demonstrating the ability to produce results in the field;
- making the findings generally available; and
- helping to build national capabilities for programming and implementing projects.

Major Accomplishments

- A body of previously unavailable knowledge on profitable production systems for making more effective and efficient use of soil and water resources in hilly zones of Jamaica.
- Renewed concern in the country for spreading the use of the systems developed through field days (farmer-visits), six-week course for students, regular visits and seminars for specialists.
- A proposal for increasing the target areas and expansion of the pilot experiment, through a project (PHILAGRIP) to be financed by the IDB (prepared with strong support from IICA; and
- Application of the Allsides systems to GOJ experimental fields at Smithfield and Sweetwater.

40. Publication No. IV-21 SEMINAR ON MULTIPLE CROPPING by MINAG/IICA/CARDI, Proceedings. December 1980

The Agricultural Research Development Department (ARDD) of MINAG in association with IICA and CARDI sponsored a one-day Seminar at the JSA Auditorium, Twickenham Park, in December 1980, on the topic of Cropping Systems.

It was proposed that emphasis be placed on evaluating existing cropping systems and closely related practices, and that strategies be sought for improving and adopting measures found to be effective and feasible.

Topics covered in the Seminar included:

- Development Potentials of Cropping Systems for Hillside Agriculture;
- Cropping Systems involving tree crops such as Banana, Coconut, Coffee, Forestry.

The Proceedings also included papers on the Role of Livestock in developing Cropping Systems and the Cropping Systems Approach to Crop Production in the Pindars River and Two Meetings Watershed Project.

41. Publication No. V-1 SMOKE CURING OF FISH (AS A HOUSEHOLD INDUSTRY IN RURAL JAMAICA)
by Norma Munquia and P. Aitken, January 1981.

The presentation was timely both in terms of:

- (i) meeting GOJ's objectives for food production and the generation of employment and income; and
- (ii) developing ancillary agro-industries from the expanding inland fishing industry.

Adaptive research could be developed for refining measures for utilizing raw materials, and possibly for developing a substitute for imported fish products.

42. Publication No. V-2 UNDER-EMPLOYMENT - ITS RELATION TO THE AGRICULTURAL SECTOR AND CONSIDERATIONS FOR ITS MANAGEMENT
by P. Aitken, A. Wahab and I. Johnson, January 1981.

Some statistics are available for calculating unemployment in Agriculture, using criteria which are often questioned by technicians. Calculations lack precision, largely due to the ineptness of the kinds of statistics often available.

Under-employment is often disguised by social systems which "protect" and "carry" the unemployed as under-employed. This is the case, especially on family farms. Under-employment is especially typical of the small-farming systems which have an excess of labour and a shortage of land.

The publication, presents an evaluation of the situation which exists in the Allsides project area, "in provocative terms", but with a view to generating further investigation on a national scale.

43. Publication No. V-3 THE CULTURE OF GRAFTED PIMENTO (A SPICE CROP) FOR HILLY LANDS OF JAMAICA by D. D. Henry and J. R. Gayle, January, 1981.

Although the importance of Pimento is well known its potential has not been exploited. There is scope for expanding its use on hillside farms on a structured basis, using methods of grafting for the duplication of cultivars.

The presentation deals with various factors and implications of such an approach for small farmers on hillside lands.

44. Publication No. V-4 AGRICULTURAL RESEARCH IN JAMAICA by A. H. Wahab and N. J. Singh, February, 1981.

The presentation was very opportune, at a time when the whole question of agricultural research in Jamaica was in the melting pot.

In spite of various studies, projects and programmes designed to deal specifically with the important area of adaptive research, which is so necessary for supporting production efforts, progress in general remained slow.

This publication deals with institutional aspects of agricultural research in Jamaica and identifies the priority areas and constraints to research.

With a view to avoiding duplication of efforts the publication also treated the relationships between MINAG's programmes and those of other national research agencies. It was hoped that the presentation would prove helpful to those responsible for formulating agricultural research policy in Jamaica; and also to agricultural researchers, particularly with respect to problems of organizing and administering national research efforts.

45. Publication No. V-5 COUNTRY LEVEL ACTION PLAN (PANP - Spanish; or CLAP - English) Internal Document, prepared by P. Aitken-Soux, I.E. Johnson and A.H. Wahab, May, 1981

The Plan (PANP/CLAP) was intended to systematize and place in ordinal perspective the agricultural situation in the country, as a basis for determining programmes and projects for IICA's involvement in each member country.

The PANP in order to determine an ordinal set of priorities for IICA:

- presents a diagnostic assessment of the Agricultural Sector;
- examines the normative targets set by the country; then
- matches these with the philosophy, objectives, strategies and Lines of Action (Programmes) of IICA.

This publication was the first revision of the PANP prepared in 1977. It was therefore intended to include any changes due to the election of a new government in October of 1980. The principal priorities for the Agricultural Sector showed little if any significant changes from those stated in 1977 and dealt specifically with the formulation of projects for:

- increasing food production for domestic purposes, including import substitution;
- increasing foreign exchange earnings through exports;
- increasing farm incomes (leading to improvement in the standard of living); and
- increasing employment opportunities for rural people.

46. Publication No. V-6 OVERVIEW OF AGRICULTURAL DEVELOPMENT IN JAMAICA by P. Aitken, I.E. Johnson and A. W. Wahab, May, 1981.

This is a re-presentation of Publication No. V-5 which was prepared largely for internal consumption. This revision provides a handy and useful tool for looking at the status quo in relation to policy, resources in agriculture, problems, technology, services, finances, past performance and the potential for development

The prime purpose is to obtain a framework likely to provide an appropriate basis for the utilization of various inputs and strategies for attaining national agricultural improvement.

47. Publication No. V-7 POLICY AND ADMINISTRATIVE ASPECTS OF THE LAND DEVELOPMENT AND UTILIZATION ACT, JAMAICA, by S. Thompson, I.E. Johnson, P. Aitken-Soux et al, July, 1981.

Awareness of Jamaica's agricultural land scarcity problems which continued to be exacerbated by increasing

population forced the GOJ to identify strategies for using agricultural land more effectively.

The main purpose of the Act (1966) was to provide a disincentive for large-land owners to keep arable land idle.

The strategies included arrangements for assisting large-scale owners of arable agricultural land to adopt proper land development practices, to make land surplus to their needs available for other farmers who have too little land, or, in the alternative, to have GOJ acquire the land for use by genuine farmers.

The size of land used as the baseline was originally 100 acres but, on the basis of observations made and statistics secured, consideration was being given to a size limit of 50 acres.

48. Publication No. V-8 THE EXPERIENCE OF JAMAICA IN THE MANAGEMENT OF AGRICULTURAL PRODUCTION ON HILLSIDES by Abdul H. Wahab, Percy Aitken-Soux, Irving E. Johnson, Bo Myeng Woo, Howard Murray, Joseph Dehaney, July, 1981.

This publication was specifically slanted for presentation (by Dr. A. H. Wahab) in a training course titled "Managing Hillsides for Production" held at Juarez, Peru, June 24, 1981, sponsored jointly by the Government of Peru and IICA/OAS.

The presentation recorded the results of the joint MINAG/IICA Project at Allsides and Olive River in the parish of Trelawny. All multi-cropping systems at Allsides were carried out on bench-terraced lands having slopes up to 17° , using yam (Dioscorea cayenensis) as the central crop.

At Olive River soil conservation measures other than bench-terracing were tested, using cropping systems similar to those applied at Allsides. The tests also evaluated soil loss.

The Project was intended to increase production and productivity of hillside lands through the application of multi-cropping systems and/or intensive cultivation of appropriately conserved soil lands.

Results obtained over a 4-year period indicated that:

- the quantity of useful biomass produced can be tripled;
- farm-income can be doubled;

- nutritional profiles can be markedly enhanced; and
- employment opportunities can be significantly enhanced.

The presentation provides background information, describing the Allsides Project in detail as well as the alternative approaches tested at Olive River.

It suggests prospective strategies for future development of Hillside Agriculture in Jamaica.

49. Publication No. V-9 YIELD RESPONSE OF YELLOW YAM (DIOSCOREA CAYENENSIS) AFTER DISINFESTING MATERIAL OF PRATYLENCHUS COFFEA by Dave Hutton, Abdul Wahab and Howard Murray - A joint MINAG/IICA effort, July, 1981.

Of several noxious nematodes affecting yams (Dioscorea spp.) in Jamaica, Pratylenchus coffea is the only one infesting yellow yam Dioscorea cayenensis, the major yam tuber grown intensively in the Allsides area.

The publication describes the comparative results of using oxamyl solution (2,000 ppm) OR water at 45° C. There were indications of the potential for a significant reduction in the losses sustained by yam cultivars and edible tubers.

50. Publication No. V-12 Misc. Pub. # 244, ISSN-0301-5378, TECHNICAL ASSISTANCE FOR THE ENGLISH SPEAKING CARIBBEAN (Considerations for an IICA Strategy) - Internal Document of Work by Percy Aitken-Soux, Abdul Wahab and Irving Johnson, September, 1981.

The objective of the authors who spent a considerable period working in the English-speaking Caribbean countries was to document suggestions, based on their experiences, for consideration in formulating functional policies for technical assistance in those countries.

Main Considerations

The main considerations of the publication relate to:

1. The IICA System, its
 - Creation, Objectives, Lines of Action
 - Traditional Strategy (Hemispheric and Humanistic)

- Membership
 - Relationship with the English-speaking Caribbean Countries (ESCC)
 - National Offices and their roles
2. English-speaking Caribbean Countries (ESCC)
 - Characteristics of IICA member countries
 - Socio-Economic Reality of the ESC area
 3. Institutional Building versus Technical Assistance
 4. Creation of Institutions in the ESC area
 - Time requirements for achieving change
 - Indications that most ESCCs create Developmental Projects as a means of solving identified problems
 5. Modal Personality of the ESCC

In spite of their sovereign status most ESCC officials continued a strong attachment to the Colonial Civil Service System and to many elements of the former British Colonial system.

51. Publication No. V-13 CROP PRODUCTION ON HILLSIDES USING NON-BENCH TERRACING HILLSIDE MEASURES OF SOIL CONSERVATION by Bo Myeong Woo, Abdul H. Wahab, and Joseph Dehaney, September, 1981.

Concern about the:

- (i) contribution of dense farmer-population to accelerated soil erosion; and
- (ii) high cost of bench-terracing (subsidized to the extent of 75% by GOJ),

prompted IICA/Jamaica to suggest an assessment of alternative soil conservation measures to those used at Allsides while using similar cropping systems, to those used at Allsides. The variables studied were: production, soil conservation measures, soil loss and soil conservation costs.

Preliminary results reported were most encouraging and indicated that soil conservation measures other than bench-terracing have a potential for substituting bench-terracing under certain conditions.

52. Publication No. V-14 AGRICULTURAL PRODUCTION AT ALLSIDES, THE ALLSIDES PROJECT CASE STUDY by Abdul Wahab, Percy Aitken-Soux, Irving Johnson, Bo Myeong Woo, Howard Murray and Joseph Dehaney, September, 1981.

The publication used empirical data obtained from the operations carried out at Allsides and Olive River.

This case study was specifically requested for presentation at the Inter-American Congress of Food and Agricultural Production at a meeting held in Sao Paula Brasil, given by Dr. Irving Johnson.

The main aspects elaborated were:

- high population of rural small hillside households;
- some 80% of the total number of farmers operated steep erodible hillsides and produced over 90% of the food grown for local consumption;
- these hillside farmers occupy the least fertile agricultural lands, as well as lands which should not be farmed intensively without the application of appropriate conservation practices.

The information indicated the potential for intensive agriculture under rain-fed conditions, producing increased yields, increasing farm incomes, improving the nutritional profile of farmers and increasing the employment potential for rural people. The basic requirements are appropriate soil-conservation strategies and improved cropping systems, inclusive of appropriate production technology.

The presentation was largely responsible for IFAD expressing the desire to assist in formulating and providing financial support for implementing a second programme for small farmers in Jamaica.

53. Publication No. V-15 INVESTIGATING CRITICAL LEVELS OF DRY-ROTTING OF YELLOW YAM (DIOSCOREA CAYENENSIS) PLANTING MATERIAL, THE BENEFITS OF DISINFESTING THE HEADS OF PRATYLENCHUS COFFEAEE, AND AFTER-PLANTING NEMATOCIDE TREATMENT
A joint IICA/MINAG publication by D. Hutton, A. H. Wahab and J. Dehaney, September, 1981.

Pratylenchus coffeae is the only one of several nematodes infesting yellow yams. It causes burning and otherwise affects the cultivar and the edible material, resulting in significant loss to the farmers. Reports

were made on tests carried out at Olive River, using chemical treatment on cultivars having varying degrees of nematode infestation.

Twelve treatments were replicated thrice using a randomized complete block design. Post-harvest infestation when compared with pre-planting infestation gave significant differences in every instance, indicating a real potential for deriving economic benefits from the use of chemical disinfectants.

54. Publication No. V-16 CRITICAL LEVELS OF DRY-ROTTING OF YELLOW YAMS (DIOSCOREA CAYENENSIS) PLANTING MATERIAL AND YIELD RESPONSES AFTER DISINFESTING HEADS OF PRATYLENCHUS COFFEAEE AND AFTER-POST PLANTING MENATICIDE APPLICATIONS
A joint MINAG/IICA project.
by D. Hutton, A. H. Wahab, H. Murray and J. Dehaney,
September, 1981.

This trial was carried out at Allsides on recently terraced land which had been cropped with yams for two successive years. There was no evidence that post-plant nematicide treatments influenced gross tuber production. However, oxamyl treatments resulted in significant reduction in the dry-rot or burning observed on harvested tubers.

55. Publication No. V-17 SEMINAR ON MEDITERRANEAN FRUIT FLY
by MINAG and IICA/Jamaica, September, 1981.

Due to the occurrence of a Mediterranean Fruit Fly infestation in Florida, USA, and given the heavy traffic existing between Miami and Jamaica, Mr. W. Van Whervin, Deputy Director of Research (Plant Protection), MINAG requested IICA/Jamaica to assist in formulating a programme to determine whether the Mediterranean Fruit Fly, Ceratitis capitata had reached Jamaica.

IICA/Jamaica consulted with Dr. Frederico Dao, Director of the Plant Health Programme for IICA and Dr. Chelston Brathwaite, IICA Regional expert on Plant Protection. Arrangements made through the USDA and the Mexican Government led to the assignment of two (2) experts, Dr. Ed Ayers (USA) and Dr. Jesus Reyes (Mexico), who working with Dr. Florence Young of MINAG set traps, identified specimens, trained local personnel, programmed and gave a Seminar, the proceedings of which are presented as this publication.

The exercise provided an indication as to how specialists in the region can co-operate in dealing quickly with a potentially critical problem.

The results showed no incidence of the Mediterranean Fruit Fly. Local technicians obtained training in detecting the pest.

56. Publication No. V-19 COUNTRY LEVEL ACTION PLAN (REVISED) by I.E. Johnson and P. Aitken-Soux, October, 1981.

This is a revision and updating of the PANP, including suggestions made by senior personnel from the IICA Headquarters, San Jose, Costa Rica.

Following the national election there was a change in Government in October 1980. A number of issues remained tentative awaiting precise action within GOJ's policy framework. Extensive quotations were therefore made in the PANP from the new Government's manifesto - "Change without Chaos". These actually became policy and were accordingly included in the PANP.

57. Publication No. V-20 PROGRAMME OF WORK TO ESTABLISH GUIDELINES OF THE EFFECTIVE ADMINISTRATION, OPERATION AND MAINTENANCE OF THE IRRIGATION AND DRAINAGE DISTRICT IN THE BRUMDEC PROJECT by Humberto Pizarro, November, 1981

An Agreement was made between the Black River Upper Morass Development Company (BRUMDEC) and IICA/Jamaica for the latter to provide technical inputs.

Four (4) main areas identified were:

- Irrigation and drainage
- Rice research and production
- Grain production
- Vegetable production

Technical reports were prepared for BRUMDEC under the aegis of the IICA/Jamaica Office.

The information provided in this the first of the required reports set the stage for an assessment of the Irrigation and Drainage inputs without which all meaningful work at BRUMDEC lands would have been forestalled.

58. Publication No. V-21 THE OPERATION OF THE DRAINAGE SYSTEM IN THE BRUMDEC PROJECT by Humberto Pizarro, November 1981.

An analytical description of the BRUMDEC Irrigation and Drainage Systems, their organization and maintenance and recommendations for improvements.

59. Publication No. V-22 RECOMMENDATIONS FOR LAND USE AND IRRIGATION NEEDS IN THE BRUMDEC PROJECT AREA by Humberto Pizarro, November, 1981.

The publication dealt specifically with land use and irrigation requirements for BRUMDEC lands.

Recommendations were based on deficits in moisture due to evapo-transpiration and effective rainfall. Refinement in the analysis was affected by the lack of topographical data, which would actually have required resources and time in excess of those provided for the consultancy.

60. Publication No. V-23 (Misc. Pub. #308, Serial # ISSN-0534-5391) ORGANIZATION, OPERATION AND MAINTENANCE OF THE IRRIGATION SYSTEM IN THE BRUMDEC PROJECT AREA by Humberto Pizarro, November, 1981.

This presentation identified critical defective areas in the system, and proposed measures which should be pursued to ensure more effective and efficient use of resources.

61. Publication No. V-24 (Misc. Pub. #309, Serial # ISSN-0534-5391) BASIC INFORMATION FOR PLANNING WATER MANAGEMENT IN THE BRUMDEC PROJECT by Humberto Pizarro, November, 1981.

The presentation discussed:

- Rainfall distribution
- Observation Wells
- Siltage Stations
- Movement of water-table height

Conclusions and recommendations were made.

62. Publication No. VI-1 (Misc. Pub. #315 Serial # ISSN 0534-5391) RICE RESEARCH AND PRODUCTION IN THE BRUMDEC PROJECT STATE-OF-THE-ART REVIEW, IDENTIFICATION OF CONSTRAINTS AND INTERIM RECOMMENDATIONS AND BUDGET FOR ESTABLISHING 405 HECTARES OF RICE ON CLAY SOILS OF THE BRUMDEC by Vivian Chin, January, 1982.

The review identified current levels of technology and productivity in the BRUMDEC Project area, and provided a basis for making ex-post facto, comparisons during the consultancy period.

The review dealt specifically with:

- Research and production results obtained by the Japanese Team of Rice experts (current project)
- Rice production practices on BRUMDEC lands
- Cost of rice production on BRUMDEC farm in 1980
- Other economic data on rice production, including purchase price of paddy, value of rice and by-products.

63. Publication No. VI-2 (Misc. Pub. #316, Serial # ISSN 0534-5391) PROGRAMME OF WORK FOR THE SHORT-TERM ADAPTIVE PRODUCTION ORIENTED RESEARCH ON RICE IN THE BRUMDEC AREA by Vivian Chin, January, 1982.

The publication set out:

objectives, strategy; methodology for experimentation; production study; seed purification (including variety selections) and training.

Consideration was given to designs used on different soil types. Tillage and water management were accorded priority treatment. A basis was provided for repeating promising trials during the second year.

64. Publication No. VI-3 (Misc. Pub. #317, Serial # ISSN 0534-5391) ADAPTIVE RESEARCH FOR GRAIN PRODUCTION, BRUMDEC, A SHORT-TERM PROGRAMME by Claude Grand-Pierre, January, 1982.

The publication dealt with grain crops other than rice.

It set out: programme objectives, methodology, and trials to be undertaken. The main crop used, cowpea, would be followed by trials using other legumes such as pigeon pea, red pea and peanut.

Non-legumes were corn and sorghum. Yield responses to fertilizer were programmed as well as a fertilizer regimen for each crop.

65. Publication No. VI-4 (Misc. Pub. #318 Serial # ISSN 0534-5391) EXPERIMENTAL PROCEDURES FOR GRAIN CROPS RESEARCH IN THE BRUMDEC PROJECT by Claude Grand-Pierre, January, 1982.

The publication sets out the relevance of the production factors employed for the crops grown; objectives;

treatments used, experimental design, and the cultural practices applied.

66. Publication No. VI-5 (Misc. Pub. #319, Serial # ISSN 0534-5391) SUMMARY OF PROPOSED PROGRAMME OF WORK FOR ADAPTIVE PRODUCTION-ORIENTED RESEARCH (SHORT-TERM) IN VEGETABLE PRODUCTION IN THE BRUMDEC PROJECT by Charles Kennard, January, 1982.

The publication presented the objectives, strategies, methodology, programme requirements for production inputs.

67. Publication No. VI-6 (Misc. Pub. #320, Serial # ISSN 0534-5391) VEGETABLE PRODUCTION (BRUMDEC) REVIEW AND PROPOSED SHORT-TERM ADAPTIVE PRODUCTION-ORIENTED RESEARCH PROGRAMME by Charles Kennard, January, 1982

The publication presented a background situation covering soil-types and climate including water and water management.

It included a programme for adaptive research, objectives, strategies, methodology and programme requirements.

68. Publication No. VI-7 (Misc. Pub. #321 Serial # ISSN 0534-5391) OLIVE RIVER RUN-OFF PLOTS - DESCRIPTION OF THE EXPERIMENT by Bo Myeong Woo, January, 1982.

The objective was to obtain an alternative to the high cost bench-terracing soil conservation method used at Allsides. Under a tripartite agreement between GOJ, Korea and IICA, a Korean expert was provided to pursue studies on soil conservation measures other than bench-terracing, employing similar cropping systems to those used at Allsides.

The main variables studied were soil loss, productivity and soil conservation cost. The initial requirement was the construction of a run-off plot for measuring soil loss.

The presentation outlined:

- various steps in the construction of the run-off plot;
- soil conservation treatment; and
- procedures for measuring and calculating soil loss from the experimental plots.

69. Publication No. VI-8 (Misc. Pub. # 325, Serial # ISSN 0534-5391) FERTILIZER EXPERIMENTS ON RICE IN BRUMDEC AREA -QUARTERLY REPORT by Vivian Chin, January, 1982.

This progress report sets out:

- factors (individually or in combination) which enhance rice production;
- response curves which can be used as guides in planning future experiments, and in the planning of a fertilizer application regimen for rice production.

The report described:

- land and experimental plot preparation;
- initiation of planting programme for plots;
- levels of fertilizer application

Problems and corrective action were discussed.

70. Publication No. VI-9 (Misc. Pub. #326, Serial #ISSN 0534-5391) THIRD QUARTERLY REPORT OF THE SHORT-TERM PRODUCTION-ORIENTED SORGHUM RESEARCH PROGRAMME (BRUMDEC) by Claude Grand-Pierre, January, 1982.

Principal activities related to experiments on: corn, sorghum, legumes as well as corn-shelling and sorghum threshing.

The report raised questions concerning the critical areas of provision of counterpart staff and storage of products.

71. Publication No. VI-10 (Misc. Pub. #327, Serial # ISSN 0534-5391) CROP PRODUCTION ON HILLSIDES USING NON-BENCH TERRACING ALTERNATIVE SOIL CONSERVATION MEASURES by Bo Myeong Woo, February, 1982.

The study detailed the operations initiated using non-bench-terraced soil conservation measures, which were presented in Publication No. VI-7.

The study covered inter alia, the following:

- Installation and Management of run-off experimental plots, and measurement of soil loss
- Soil conservation treatments
- Cropping systems and management
- Measurement of production

Areas of emphasis for the first two years were soil conservation and agronomic practices. Early successes achieved justified a continuation of the measures pursued. It was proposed that plots larger than the experimental ones tried should be used for collecting and assessing socio-economic data.

72. Publication No. VI-11 (Misc. Pub. #323, Series # ISSN 0534-5391) WORKSHOP ON AGRO-CLIMATIC ZONING CASE STUDY by Michel Eldin (IICA/Jamaica); Philemon Hoilett, Ina Pyne and Calvin Gray, (Meteorological Department) and Renford Baker (MINAG), April, 1982.

This publication arose from a request from the Prime Minister for IICA's preparation of a profile for an Agro-Meteorological Zoning Strategy for Jamaica.

The Strategy for Jamaica

The strategy included:

- (i) Securing the assistance of Mr. Michel Eldin, an expert in this field, from IICA Headquarters.
- (ii) A workshop programmed to explain the methodology and to test the suitability of existing available data and determine the gaps which exist.
- (iii) A one-week workshop.

The data listed were those obtained from the Palisadoes Meteorological Station.

The proceedings of the Seminar were presented in the document under review titled "Workshop on Agro-climatic Zoning."

The workshop covered, inter alia

Background and purpose of study
Uses, Data needs
Conclusions and Recommendations

A basis was provided for preparing a written proposal for Agro-meteorological Zoning of Jamaica, which as requested by the Prime Minister, was submitted to the IDB for support. The Zoning proposals if adopted could assist in solving some of the major problems related to rural development.

73. Publication No. VI-12 (Misc. Pub. # 353 Series # ISSN 0534-5391) VEGETABLE PRODUCTION PROGRAMME, BRUMDEC AREA SECOND QUARTERLY REPORT by Charles P. Kennard, April, 1982.

A continuation of Publication No. VI-6.

The Publication discussed:

- The Applied Research Programme pursued.
- Specific work done on the Morass Peat soil, covering agronomic work on vegetable crops, inclusive of fertilizer trials.
- Programme for the next season.

74. Publication No. VI-13 (Misc. Pub. #352, Series # ISSN 0534-5391) FINAL REPORT ON GRAIN EXPERIMENTAL WORK IN BRUMDEC AREA
by Claude Grand-Pierre, May, 1982.

The Final Report on this short-term Production-Oriented Grain Crops Research Programme covers:

- Limitations due to non-provision of facilities, and loss of grain corn due to praedial larceny, rendering it impossible to assess corn production.
- Results of experimental work on grain sorghum
 - . deficiencies of phosphorus and nitrogen
 - . recommendations concerning optimal fertilizer applications.

Constraints and Problems in the Project Area

- Land management problems for the plot allocated for research, specifically drainage requirements and land shaping on the mineral soils.

- Recommendations:

- . Minimum tillage for Morass Peat Soil;
- . Maintenance of optimum height of water-table;
- . Use of light equipment such as roto-tillers; and
- . Over-head irrigation system.

- Requisites:

- . Appropriate plant protection programme; and
- Optimal cropping pattern

- Future Grain Production Research Profile:

- . Crop fertilizer application
- . Population density
- . Plant Protection

75. Publication No. VI-14 (Misc. Pub. #354, Series # ISSN 0534-5391) LABORATORY SAFETY SEMINAR- ANIMAL HEALTH CONFERENCES
by J. Richmond, June, 1982.

The need for improved maintenance of laboratory equipment was identified at the Second Hemispheric Reunion of Directors of Animal Health, REDISA II, held at IICA Headquarters, San Jose, Costa Rica, during September, 1980.

In May, 1981, through the aegis of IICA a Regional Seminar/Workshop on "LABORATORY EQUIPMENT MAINTENANCE" was arranged by the Director of the Animal Health Division of IICA for the Antillean Zone.

Dr. J.Y. Richmond was specially selected to present papers on "Techniques for Achieving Laboratory Safety Measures".

The GOJ agreed to host the Seminar which was held at the Veterinary Division, Hope, May 18-22, 1981. The Seminar was organized and co-ordinated by the Director of Animal Health (Antillean Zone), IICA/Jamaica, and the Veterinary Division of MINAG, Jamaica.

Participants included: Regional Officers, Veterinarians, Laboratory technologists, MINAG personnel, and Medical Technologists from the Ministry of Health, Jamaica.

The Agenda covered consideration on a wide range of instruments which mainly emphasized the principles, functions and procedural applications.

Laboratory Safety was highly recommended for continuing study by the Directors of Animal Health for the region.

The proceedings of the Seminar which are presented in this Publication covered the following topics:

- The Plum Island Animal Disease Centre:
its Mission, Goods and Operations
- Containment of Infectious Micro-organisms
- Bio-hazard Awareness and Risk Control in
Laboratory Animal Facilities
- A Review of Laboratory Safety Procedures

76. Publication No. VI-15 (Misc. Pub. #351, Series # ISSN 534-5391) FRESHWATER PRAWN (SHRIMP) CULTURE FOR JAMAICA AN EXPLORATORY REPORT
by Michael Wiles, June, 1982.

Awareness of a potential for developing a fresh water shrimp industry in Jamaica, on commercial lines, prompted IICA/Jamaica to hold preliminary discussions with likely interested parties. These included the Permanent Secretary, MINAG, the Professor of Zoology, UWI, Mona; and Private Sector interests.

Based on those discussions IICA/Jamaica sought and obtained the assistance of Professor Michael Wiles, Professor and Chairman of the Biology Department of St.

Mary's University, Halifax, Nova Scotia, Canada, while on Sabbatical leave.

Professor Wiles' assignment included:

- (i) identification of a project;
- (ii) undertaking preliminary work necessary for providing some of the parameters required for preparing an appropriate feasibility study.

The Permanent Secretary of MINAG made available appropriate facilities on a GOJ-owned property at Pear Tree Bottom River in the parish of St. Ann, for the conduct of the study.

A number of preliminary investigations carried out provided useful inputs for the feasibility study. The proposals included:

- a research programme;
- special studies on the cannibalistic nature of four (4) main freshwater shrimp species, namely: Macrobrachium acanthurus, M. carcinus, M. faustinum and M. rosenbergii.

Further proposals were:

- (i) the work should be carried out by selected University Graduate Students, under the direction of a Resident Research Director, on GOJ-owned land;
- (ii) the study should be a joint GOJ/IDRC/IICA exercise extending over a period of three years.

77. Publication No. VI-16 (Misc. Pub. #357, Series #ISSN 0534-5391) GOAT-REVOLVING SCHEME - PROJECT MODEL-RURAL WOMEN PROJECT by Norma Munqia and Byron Lawrence, July, 1982.

GOJ's main objectives for the improvement and development of its rural sector include:

- increasing agro-based output for providing food for local consumption and for import substitution;
- increasing employment activities and rural income; and
- developing agro-based industries.

A Goat Revolving Project was formulated by MINAG and IICA/Jamaica to assist in meeting GOJ's objectives. In addition there was the question of the high level of unemployment among rural-women in many rural households. IICA and a number of international funding agencies e.g. IFAD had begun to place high priority on improving the income earning potential and ultimately the quality of life of rural women.

A Goat Revolving Project was formulated by MINAG and IICA/Jamaica to assist in meeting GOJ's objectives. Such a Project, it was felt could serve as an integrative mechanism, which facilitates the creation of small primary groups which have a potential for enhancing technological change in the rural sector.

The publication set out inter alia,

- objectives and targets;
- description of the proposed revolving scheme; including selection of participants;
- training, husbandry;
- marketing, including processing of products, financing
- evaluation and follow-up; and
- budget proposal

78. Publication No. VI-17 (Misc. Pub. #356, Series # ISSN 0534-5391) EXPERIMENTAL DESIGNS FOR CASSAVA AND PEANUT PRODUCTION SYSTEMS by IICA (Franklin E. Rosales) and MINAG, June, 1982.

Low production and productivity continued to affect farmers' incomes and maintain a high dependence on food imports. Increasing food production for local consumption, export, and import substitution remained high on the GOJ's priority list.

Major causative factors identified as being responsible for the sub-potential production performance include:

inappropriate land utilization practices, low technology levels, inadequate credit, sub-standard training, and inappropriate social organization and marketing.

Although cassava and peanuts have been produced traditionally by a large number of farmers, output remains short of the potential. The Cassava Factory built by GOJ at Goshen in St. Elizabeth, continued to receive inadequate quantities of raw materials. An

associated factor was the dissatisfaction of farmers with the operations of the factory.

For peanuts, local production is unable to meet existing demand which largely relates to a small element of the potential demand when consideration is given to such facets as oil for human use, animal feeds and other products.

With a view to improving the performance profile for these two crops, an Agreement was signed between GOJ (MINAG) and IICA for the execution of a project to be financed from IICA's Simon Bolivar Fund.

The project titled "Cassava and Peanut Production and Implementation Study in Jamaica" was programmed to be initiated on January 1, 1982. IICA's major responsibility was to co-operate with the St. Elizabeth Land Authority in developing appropriate technology for the production of cassava and other associated crops such as peanuts - St. Elizabeth being the parish which produces most of the peanuts and cassava grown locally.

The Publication states the project objectives and strategies to be pursued. Consideration was also given to on-going research.

The experimental designs adapted were:

Thetford Seed Farm (St. Catherine)

Cassava/Corn multiple cropping
Peanuts, Gypsum and Nitrogen levels of soils, varieties

Goshen, St. Elizabeth

Cassava (spacing trials)/Peanuts - Multiple Cropping
Cassava - Multiple Cropping (without pruning)
Cassava (pruning) - Peanuts, Pigeon Peas,
Multiple Cropping
Complementary studies to Multiple Cropping Systems

Elim, BRUMDEC Area, St. Elizabeth

Cassava (spacing)/Peanuts, Multiple Cropping
Peanuts - Varieties and Plant Densities
Peanuts - Gypsum levels of soils, varieties

Factors considered in each experiment were:

- . Objectives
- . Varieties

- . Experimental Design
- . Spacing area and plot size
- . Planting Materials
- . Levels of fertilizer and other input application

79. Publication No. VI-18 (Misc. Pub. #359, Series #ISSN 0534-5391) INSTITUTIONS IN THE AGRICULTURAL SECTOR OF JAMAICA (A CATALOGUE) PRELIMINARY VERSION by S. B. Bandara, UWI Library, Mona, in collaboration with Mrs. S. Bandara, MINAG Library, July, 1982.

At the time when IICA/Jamaica and MINAG (Library Services) were collaborating in developing plans for establishing a National Information System (NAIS) for Jamaica it became apparent that information on the names and listings of agricultural institutions was totally inadequate. As a first step it was proposed to complete two directories of:

- (i) Organizations in the Public and Private Sector which are engaged in Agriculture, Agro-Industry and other related areas; and of
- (ii) Persons with Specialized and technical skills engaged in these fields.

Responses obtained by questionnaires fell considerably short of actual numbers. It was hoped to improve on the initial exercise. The Publication listed 453 organizations and/or persons.

80. Publication No. VI-19 (Misc. Pub. #322, Series #ISSN - 0534-5391) VEGETABLE PRODUCTION PROGRAMME, BRUMDEC AREA THIRD QUARTERLY REPORT, March 19 - June 18, 1982 by Charles P. Kennard, June, 1982.

The Publication continued and updated the BRUMDEC series of adaptive research papers. It dealt specifically with:

- First season's programme of work covering beans, cabbage, cauliflower, cucumber, carrots, eggplant, pepper and watermelon.
- Second season's programme of work covering: fertilizer and micro-nutrient studies; varietal trials for onion, string beans and carrot; commercial and semi-commercial trials for cabbage, cucumber, okra, sweet corn, tomato and watermelon.

- Consideration on putting together a technical package of practices, based on information, data and experience to date.

Recommendations were made for operations necessary for completing the objectives of the consultancy.

81. Publication No. VI-20 (Misc. Pub. #363, Series #ISSN 0534-5391) MUSHROOM PUBLICATION - AN ANNOTATED BIBLIOGRAPHY OF LITERATURE AVAILABLE IN JAMAICA by Mrs. Swarna Bandara, MINAG Library & Samuel Bandara, UWI Library, September, 1982.

Much work of an unco-ordinated and imprecise nature has been done on mushroom production in Jamaica. The known potential of developing an industry having high returns to correspondingly low inputs, formed the bases for identifying literature on this subject.

The Publication synthesized information which can be used in pursuing work in the structured production of mushrooms on commercial lines.

82. Publication No. VI-21 (Misc. Pub. #362, Series #ISSN 0354-5391), Final Report: ADAPTIVE PRODUCTION- ORIENTED RESEARCH PROGRAMME ON VEGETABLES, BRUMDEC by Charles P. Kennard, September, 1982.

This Publication finalized work for this consultation on vegetables grown under the specific conditions obtaining on lands which fall under the jurisdiction of BRUMDEC. The report indicated awareness that in spite of the fact that the period of research was short, it was able to provide information indicating that vegetable production on the BRUMDEC lands can be very profitable. A period of one year was considered to be too short for procuring all the technical inputs required.

83. Publication No. VI-22 (Misc. Pub. #366, Series #ISSN 0534-5391) MAKING COMPOST - A GUIDE FOR AGRICULTURAL PERSONNEL by Bo Myeong Woo and Franklin E. Rosales, Sept. 1982.

Dr. Woo a technician from the Republic of Korea, who provided technical assistance under a tripartite (IICA/GOJ/Korea) agreement, was the main author of the Publication.

The work was carried out at Olive River in the Parish of Trelawny as a complementary exercise to the work being done at Allsides. The main project objective for Olive River was to determine the efficacy of soil conservation methods other than the expensive bench-terracing while employing similar cropping systems to those used at Allsides.

The compost sub-project had as its prime objective the use of virtually valueless biomass derived from land clearing and from crop wastes for making compost.

The Publication presented some of the main principles applied in the making of compost.

84. Publication No. VI-23 (Misc. Pub. #364, Series #ISSN 0534-5391) SHORT-TERM PRODUCTION ORIENTED RICE RESEARCH PROGRAMME - THIRD QUARTERLY REPORT by Vivian Chin, September, 1982.

The Report up-dated the information presented in Publication No. VI-8. It presented a progress report on the rice experiments, the objectives of which were to:

- quickly identify fertilizer factors which individually or in combination enhance the growth and grain production of rice; and
- develop response curves to be used as guides in planning future rice experiments in the BRUMDEC area.

85. Publication No. VI-24 (Misc. Pub. # 355, Series #ISSN 0534-5391) FINAL REPORT OF THE SHORT-TERM PRODUCTION-ORIENTED RESEARCH PROGRAMME IN RICE AT THE BRUMDEC AREA by Vivian Chin, November, 1982.

This Publication concluded the first phase of the Rice Studies conducted on lands under the control of BRUMDEC.

It up-dated information presented in the three (3) earlier quarterly reports on the subject. It indicated amendments which could possibly lead to increased output of rice.

The report implicitly identified gaps in available rice technology and set out recommendations for future applied research for rice both on mineral soils and on morass peat.

Recommendations were made concerning:

- improvement of rice quality
- training of staff in rice technology
- selection of rice varieties
- application of fertilizers and micro-nutrients
- plant protection

86. Publication No. VI-25 (Misc. Pub. #365, Series #ISSN 0534-5391) SUPPLEMENTARY REPORT ON THE APPLIED RESEARCH WORK CARRIED OUT WITH RED BEANS ON BRUMDEC LANDS by Vivian Chin and Claude Grand-Pierre, November, 1982.

The Publication concluded a few aspects of the production of red beans under BRUMDEC soil conditions which were incomplete at the expiry of the consultancy.

The specific conclusions and recommendations particularly in relation to fertilizer application and variety trials, should be read in conjunction with the findings of the earlier reports in the series on the production of red beans.

87. Publication No. VI-26 (Misc. Pub. #367, Series #ISSN 0534-5391) REVIEW OF TECHNICAL DOCUMENTS PRESENTED IN THE IICA/JAMAICA SERIES "AGRICULTURE IN JAMAICA" by Irving E. Johnson and Percy Aitken-Soux, Nov. 1982.

This review presented brief notes on the 100 documents reported. During the earlier sections the overall purpose indicated was that of recording work done not only by IICA technicians but by others on subjects which have relevance in enhancing the performance of the Jamaican Agricultural Sector. Some documents were prepared by non-IICA participants on a contractual basis.

Earlier focus was on the production of documents. The hope was expressed that subsequently, the focus would not only be on production but also on the quality of documentation.

88. IICA Jamaica Miscellaneous Publication #423, Series # ISSN 0534-5391 POSITION PAPER ON ROOT CROPS IN JAMAICA

A joint preparation by MINAG/UWI/IICA-JAMAICA, prepared by a Multi-disciplinary team comprising: Bennett, D.,

Pitter, M., Jones, L., Blake, R., Rosales F., (IICA) and Banton O., of the Root Crops Commodity Research Committee (RCCRC) - 1983.

An earlier Position Paper was prepared by the RCCRC under the Chairmanship of Dr. Abdul H. Wahab, Agricultural Research Specialist, IICA/Jamaica in 1981.

The presentation was largely based on observations made that, in Jamaica, root crops exhibit a higher potential for producing carbohydrates than cereals. The publication presented an overview of the status of the major root crops produced locally.

The crops studied were:

Yams	<u>Dioscorea spp.</u>
Potatoes	
Sweet Potatoes	<u>Ipomoea batatas</u>
Irish Potatoes	<u>Solanum tuberosum</u>
Edible Aroids	
Dasheen	<u>Colocasia spp.</u>
Coco (tannia)	<u>Xanthosoma spp.</u>
Cassava	<u>Manihot esculenta.</u>

Major areas of examination covered were:

- production (including locations)
- productivity
- agronomy (including mixed cropping systems)
- processing potential
- export potential
- varietal performances
- crop protection and storage (including the use of tissue culture for securing pathogen-free cultivars for planting)

Major constraints were identified as well as the necessity for liaising with renowned Agricultural Research and Development Institutions such as:

- International Potato Centre, (CIP) Peru, for studies on late blight on Irish Potatoes
- International Centre for Tropical Agriculture (CIAT), Columbia, for cassava
- Asian Vegetable Research and Development Centre (AVRDC), Taiwan, for Sweet Potato germ plasm and Sweet Potato weevil control
- International Institute for Tropical Agriculture (IITA), Nigeria, for Yam cultivars from aerial tubers.

89. AGRO-CLIMATIC STUDY OF JAMAICA
by Michel Eldin and Jean Paul L'homme, November, 1983.

The study was sponsored by IICA as part of its support to the enhancement of agricultural development in Jamaica.

Objective

To increase knowledge concerning agro-climatic conditions to facilitate optimal development of agriculture, especially in view of the fact that water shortage is a major limiting factor in agricultural production in Jamaica.

The study was based upon frequency analysis of annual rainfall distribution for some 70 stations. It was undertaken to facilitate the formulation of an agro-climatic zoning strategy for Jamaica. The findings were expected to assist in choosing the most suitable crops and the most appropriate sowing or planting dates as a function of the vegetative cycle length of crops.

Main collaborators with IICA in undertaking the study were the Jamaica Meteorological Services (Ina Pyne and Philemon Hoilet) who assisted considerably in setting up a meteorological data bank for the study.

90. MARKETING HINTS FOR JAMAICAN CRAFT VOLUNTEERS
by Things Jamaican and IICA/Jamaica, August, 1983.

This booklet was prepared for enhancing the performance of Jamaican Craft-workers specifically through the improvement in their marketing activities. It complements THINGS JAMAICAN's efforts to improve the quality and variety and increase total output of Jamaican craft-products, and ultimately enhance the development and well-being of rural people.

The booklet deals with:

- . Definitions of Craft-Workers
- . Crafts
- . Marketing of Products
- . Problems and sources of help

Under its INTEGRATED RURAL DEVELOPMENT PROGRAMME IICA's specific function is to collaborate with the Government's of its member countries in Latin America and the Caribbean in improving the standard of living of

rural populations through agricultural development programmes. This includes the provision of formal and non-formal training for the many programme beneficiaries.

Four (4) staff members of IICA Jamaica Office collaborated with Things Jamaican in the preparation of the manual.

91. PROJECT DESIGN AND PROPOSAL WRITING - A SIMPLE FORMAT
by Jan Hurwitch MacDonald, Revised July, 1984.

The publication set out the main components of the proposal, leaving the ordering to individuals. The components listed were Summary (first item) to be followed in chosen order by:

- . Introduction
- . Problem Statement
- . Objectives
- . Strategy
- . Personnel
- . Evaluation
- . Budget

92. JAMAICAN CRAFT: OUR PRIDE AND HERITAGE
by Things Jamaican Ltd. and IICA Jamaica, Nov. 1984.

A second Craft manual written to demonstrate the vital functions of handicrafts in the life of the Jamaican people.

A stated GOJ policy was that products developed through the influence of Things Jamaican should relate where possible to historical periods and ethnic influence on Jamaican life. A part of the philosophy is to acquaint Jamaican craft workers of the existence and value of certain products in Jamaican heritage and to motivate their reproduction.

The Manual is an initial attempt to encourage craft workers to regard craft-work as a source of pride and an important part of their heritage.

The Social Development Commission and the HEART Foundation collaborated with Things Jamaican Ltd., through their respective training programmes in working towards the achievement of these goals.

The publication traced craft activities under five (5) cited periods namely:

- . The Arawak Indians
- . The Spanish Influence
- . The Maroon Influence
- . The Port Royal Influence
- . Contemporary Influence

The Manual catalogued the development and promotion of shops retailing handicrafts, the creation of THINGS JAMAICAN and the development of Devon House as a major craft disposal outlet.

The Manual discussed materials used and products obtained under different ethnic influences. It commented on: Craft in the Contemporary World, and reviewed Pottery in Jamaica.

A simultaneous national policy instrument was the enactment of legislation to protect wild-life species. e.g. turtles (producing turtle shells) and to encourage craft-workers to take advantage of technological advances which accommodate the use of a wide range of substitute raw materials e.g. the horns of cows and goats as a replacement for turtle shells.

93. FARMING SYSTEMS RESEARCH WORKSHOP (CROPPING SYSTEMS PROJECT
by MINAG/IICA/Jamaica, December, 1985.

A Cropping Systems Research Project was implemented by MINAG in November 1984 to initiate and develop a structured Farming Systems Research (FSR) programme in two different ecological zones of the St. Catherine Land Authority.

The Project was implemented by IICA/Jamaica on behalf of MINAG. IICA was assigned responsibility for co-ordination, technical monitoring and administration of funds. The Agricultural Research and Development Division (ARDD) of MINAG was responsible for on-farm research. Implementation was pursued through a multi-disciplinary team consisting of a Core Team and two Field Teams.

The workshop was designed to meet several objectives to enhance the Cropping Systems approach and its movement into an FSR Programme. The major workshop objectives were to:

- assist participants in understanding Farming Systems Research and Development concepts, procedures and limitations in the application of various features of the Jamaican Cropping Systems Research Project;
- assist participants in understanding the signification of the various processes of team-building for carrying out the FSR Programme;
- assist in the identification of the skills, needs and capabilities of individual team members selected for implementing the FSR approach;

The workshop was sponsored by the IDRC which financed the Cropping Systems Research Project through IICA.

Recommendations were made for:

- (i) A follow-up workshop;
- (ii) Improvement and/or extension of the workshop content of topics;
- (iii) Institutionalizing the Food Crops Research Project to enable all extensionists to benefit from research being pursued under the programme; and
- (iv) Up-grading facilities at Twickenham Park to accommodate training and attract the participation of International Agencies.

94. A STUDY OF THE GROWING AND PROCESSING OF CASSAVA INTO CHIPS FOR ANIMAL FEEDS
by Sherwin A. Shand, May, 1986.

Recognition of the continuing national need to conserve the use of scarce foreign exchange earnings and to develop crop production programmes for import substitution led to the inclusion of cassava in such a strategy.

The IICA/Jamaica Office in support of the national strategy pursued action through a number of studies and activities designed to enhance commercial cassava production.

This publication reports on a study undertaken to determine related issues which impact on investigations into the feasibility of substituting cassava for corn (Maize), in an on-going national programme for the local production of animal feeds at affordable prices.

The study examined several aspects including the production and processing of cassava for making chips for animal feed ingredients, economic considerations implicit in the evolution of an appropriate substitution programme, and the resulting foreign exchange earning potential.

The Terms of Reference include an examination of:

- . Production costs on farms of different sizes (large, medium, small)
- . Drying costs for cassava
- . Economic feasibility of replacing corn with cassava
- . Economic feasibility of alternative uses of cassava
- . Total resources needed for achieving production targets
- . Overall state-of-the-art in relation to production and processing of cassava
- . Production of cassava specifically for making cassava chips; and
- . Attitudes towards substitution of corn by cassava

95. AN EXAMINATION OF THE APPROACH USED IN UNDERTAKING COST OF PRODUCTION STUDIES OF THE DAIRY ENTERPRISE IN JAMAICA by Winston Ruthven Rudder, Farm Management Consultant, IICA Jamaica, May, 1986.

The study examined the methodology being used by MINAG's Farm Management Division to determine technical co-efficients which depict product performance and underlie milk production costs. Certain limitations were identified with respect to the specification and formulation of the farm models used, valuation of assets, analysis of costs and the technical co-efficients derived.

Recommendations were made for three (3) broad issues, viz.

- enhancing the institutional infrastructure
- improving the existing data base
- modifying the methodology of constructing cost studies

The author collaborated with a number of institutions and individuals drawn from MINAG, Jamaica Livestock Association (JLA), AGRO-21 and farmers (large, medium and small-scale).

An extended list of recommendations included:

- provision of technical assistance to improve capability of the Farm Management Section (FMS), including training and more timely processing of survey data;
- firmer relationship between FMS and Extension Service and Research and Development Division of MINAG;
- immediate review of the production cost structure to determine and analyze the variability in milk production costs of several categories of dairy farmers;
- identifying and formulating farm models which are more representative of the dairy farming population, as a basis for improving the technical coefficients derived; and
- modifying statistical sampling techniques used for selecting farm models.

96. IICA Miscellaneous Publication #ISSN #0534-5391)
INCOME GENERATION BY RURAL WOMEN - Second Edition
by Jan Hurwitch MacDonald, November, 1986.

The objective of the Project described is to create an Integrated Support System (ISS) for self-managed labour intensive production projects for rural women.

Background

With a view to improving and enhancing the role of women's employment on a global basis, the United Nations in 1975 declared the period 1976-1985 as the UN Decade for Women.

Based on the findings of an informal meeting of nine US women assembled in 1975 to lay the foundations for a non-profit women's organization it was agreed to develop a programme methodology responsive to the target group which was identified as the low-income rural women of Latin America and the Caribbean.

The methodology subsequently determined was that of pursuing income-generating projects for women through an Integrated Support System (ISS).

Such a methodology was tested in the Dominican Republic and Barbados, in which credit, training, technical assistance and marketing were combined into an Integrated Support System (ISS).

Member nations of IICA participated in the Decade for Women Programme. For Jamaica a Rural Small Enterprise Project was developed which while being directed at low income rural women also attracted participation from other women and a number of men.

The Project

This publication is a monograph on the methodology applied in the Dominican Republic, which has application elsewhere. The major aspects of the presentation relate to:

- . Areas of employment - agriculture, livestock-rearing, handicraft, food processing and rural services.
- . Income-generating strategies; selection criteria for projects and the ultimate preparation of a feasibility study.
- . Diversification of Rural Farm Family Income sources.
- . Heavy emphasis on training in the areas of rural organizations, production techniques and business skills.
- . Funding mechanisms, especially on revolving loan programme.
- . Participation of Rural Women's Association (RWAs) at all levels, viz planning, implementation and evaluation, and their involvement at all stages of consultation, representation, incorporation and direction.
- . Institutional collaboration.

Conclusions

- . Organization of RWAs and planned institutional collaboration
- . Benefits derived are attractive

Increased involvement of RWAs in areas which have a potential for diversifying rural family income sources.

97. TISSUE CULTURE AND MINI-SETT TECHNOLOGIES SEMINAR FOR AN IMPROVED YAM PRODUCTION SYSTEM - Final Report
by Ministry of Agriculture (MINAG), International

Institute of Tropical Agriculture (IITA), University of the West Indies (UWI), Scientific Research Council (SRC) and IICA, November 24 - December 5, 1986

The Yam "mini-sett" technology was introduced to Jamaica through the International Institute of Tropical Agriculture (IITA) in 1985. The results were very impressive and showed an enormous potential for enhancing yam production for local consumption and export.

IICA/Jamaica's concern over sharing the benefits derived from the use of the tissue culture/mini-sett technology led to the mounting of a Seminar during the period November 24 to December 5, 1986, specifically for technicians from the major yam-producing English-speaking Caribbean countries. The theme was the Application of the Tissue Culture and Mini-sett Technology as a Component of Improved Yam Production Techniques.

A test manual developed by Dr. Vishnoo Asnani of IITA in collaboration with Mr. Stephen Harewood of IICA was introduced at the Seminar. Visual aids were prepared and used in the Seminar specifically for depicting the various aspects and stages of the technology.

The IICA Jamaica Office collaborated with other IICA Offices in the region in securing participation from other Caribbean countries, e.g. Barbados, Dominica, Grenada, Guyana and St. Lucia, all having a high dependence on yam production. Funding of the Seminar was made available by the IDRC of Canada to the IICA Jamaica office which had a major input in organizing the Seminar.

The Seminar was conducted by Dr. Asnani. Lecturers were drawn from several organizations including UWI, CARDI, MINAG, SRC and IICA Jamaica office.

Practical field work and demonstrations formed an important element of the Seminar. Visits were made to MINAG's research station. Participants carried out

practical tests in the various steps of micro-propagation and development of plantlets at the Tissue Culture Laboratory of the SRC (Winchester Road, Kgn.)

Participants not only expressed satisfaction with the Seminar but also requested continuous follow-up and maintenance of correspondence with Seminar colleagues on this important topic.

98. REPORT ON THE CASSAVA PROGRAMME IN JAMAICA - SEMINAR II
by MINAG and IICA, December, 1986.

Since 1985 the IICA Office has been involved in assisting the Government of Jamaica through MINAG in developing a structured national programme for the expanded economic production of cassava, particularly for providing ingredients for animal feeds.

The second Seminar was an intensive one-day session of lectures and discussions on various activities relating to the production and disposal of cassava. This was followed by two days of field trips which included visits to the various cassava experimental plots.

This Seminar was a follow-up to the three-day Seminar held October 7-9, 1986. It used as background the proceedings of the previous seminar. The potential use of cassava as a substitute for corn in animal feeds was discussed. The discussions also included the economics of production, mechanization of harvesting and the processing of cassava.

This publication is a presentation of the Proceedings of the Seminar which covers:

- Potential use of cassava in Jamaica;
- General and specific problems and constraints in resolving them;
- Use of cassava as a substitute for corn in livestock feeds; and
- Economic aspects of cassava production.

99. TEACHING TOOLS FOR SMALL BUSINESS TRAINERS
by a Multi-agency team drawn from: MINAG, Ministry of Construction (MC), MYCD, NDF, SSF, SBAJ, Things Jamaican, IICA. Revised May, 1986.
A Manual for Trainers in Small Business Training Programme intended to be non-formal, voluntary and to encourage reasoning and thinking rather than memorization.

It covered:

- The Approach
- How People Learn
- Elements of Lesson Activities)
- Planning the Event) The Lesson Plan
- Trainer Preparation)
- Training Performance)
- After Training) Getting Ready

100. IICA Miscellaneous Publication Series # A2/JM-86-001
ISSN 0534-5391 STARTING AND FINANCING A SMALL BUSINESS
IN JAMAICA - A GUIDE

Prepared by a Multi-agency team drawn from the following agencies: MINAG, Ministry of Construction (Housing), Ministry of Youth and Community Development (MYCD), National Development Foundation (NDF), Self-Start Fund (SSF), Small Business Association of Jamaica (SBAJ), Things Jamaican and IICA.

This Publication was developed for assisting those wishing to start a small business, to plan the business and determine its feasibility. Like other guides (manual) of this set developed through the Small Business Training Advisory Committee (SBTAC) it was designed to assist prospective small businesses get off the ground and others to improve their techniques and performances.

The Manual covered the following areas:

- Feasibility** - possible businesses (general kinds)
- material resources for each kind
 - human resources necessary/available
 - physical resources
 - financial resources
 - feasibility study
 - preparing project plan

- Financing**
- Importance of
 - Sources
 - Preparing loan requests proposals

Setting up Small Business

- Selecting the Legal Structure
- Decisions concerning production and marketing - Physical organization

- Record Keeping
- Customer relations

101. IICA Miscellaneous Publications Series # A2/JM-86-002
ISSN 0534-5391 MARKETING JAMAICAN SMALL BUSINESS PRODUCTS - A GUIDE 1st Edition, December, 1986
Prepared by MINAG, MYCD, NDF, SSF, JNIP, SBAJ, Things Jamaican, IICA.

Prepared for use by micro-entrepreneurs who wish to improve or learn about proper marketing methods but lack the requisite material. This Manual was also the product of the Small Business Training Advisory Committee.

The Manual covered the following broad areas:

Importance of Marketing for Small Businesses

- definitional, activities, promotional, and pricing

Studies and Strategies for production, prices and promotion for marketing in Manufacturing Businesses, Retailing Businesses, Farming Businesses and Services.

102. IICA Miscellaneous Publication # A2/JM-88-04 OPERATING A SMALL BUSINESS IN JAMAICA - A GUIDE - Second Edition, July, 1988, prepared by a Multi-Agency Team drawn from MINAG, Ministry of Construction (MC) - Housing; Ministry of Youth and Community Development (MYCD); National Development Foundation (NDF); Self-Start Fund (SSF); Small Business Association of Jamaica (SBAJ); Things Jamaica Ltd., (TJ) and IICA.

This publication was prepared as a guide to operating a small business for many who lack the basic pre-requisites and for trainers who work with small business people.

The materials were developed in Jamaica by a group of agencies, representatives from which formed the Small Business Training Advisory Committee (SBTAC).

The Series consists of three (3) manuals, the other two (2) being:

- Starting and Financing a Small Business; and
- Marketing Small Business Products

Their target groups, consisting of small producers, are:

- Manufacturers
- Farmers
- Retailers
- Rural Services Personnel

This Manual is presented in three (3) Parts, viz.

ABC's of Business
Basic Record Keeping
Planning and Analysis of a Business

The ABC's of Business discussed:

The Importance of Management
Marketing the Product or Service
Organizing Production
Buying and Selling
Cost of Price Calculations

Record Keeping discussed:

Receipt, Order and Cash Books
Production and Stock Records
Valuation of Assets
Performance

Planning and Analysis covered:

- Overall Planning, Budgeting, Cash Flow Profile
- Increasing Income and Profits

103. Miscellaneous Publication Series No. A2/JM-87-001
#ISSN 0534-5391 PROCESSING OF CASSAVA FOR ANIMAL FEED
IN JAMAICA
by W. O. N. Harvey, February, 1987.

In supporting the recognition of a potential for increasing commercial production of cassava in Jamaica and also the potential for using cassava as a substitute

for some of the imported feed ingredients used, IICA under Contract No. AC/JM-765, obtained the services of Mr. W.O. Neil Harvey to undertake this study.

The publication described the principles of drying cassava as they relate to commercial procedures for preparing animal feeds in Jamaica. It also analyzed the processes used by the Cassava Flour Factory at Goshen in St. Elizabeth.

The publication dealt specifically with:

- Chipping of cassava, sun drying, including improvement in equipment.
- Drying - solar, sun drying, including equipment
Processing capacity:-
 - . existing, including the performance of the Cassava Flour Factory at Goshen;
 - . the potential demand and the need for increased capacity;
 - . alterations necessary for achieving change in product;
- Increased production (implicit) of cassava to create volume, cost-effectively, necessary for significant level of import substitution.
- Modifications in equipment to achieve effective production of a coarse type of cassava flour for use in formulating animal feeds.
- Optimal harmonization of cassava processing and production of cassava.
- Cost analysis.
- Recommendations arising therefrom.

104. LIVESTOCK, CROP AND PLANT PROTECTION DEVELOPMENT PROGRAMME - A Methodology to Establish Priorities for Research Projects, by MINAG and IICA/Jamaica, Nov. 1987.

This exercise designed to assist in up-grading its Agricultural Research and Development services was conceived against the background of:

- . inadequate and inappropriate programme development
- . a lack of socio-economic guidelines in the determination of priority areas; and
- . absence of the attendant cost-effectiveness which impacts on national goals and objectives.

MINAG proposed the preparation of a Scientific Methodology on Programme Development. Such a methodology was prepared through collaborative efforts between the Agricultural Research and Development

Division (ARDD) of MINAG and IICA Jamaica. The document provides a baseline for further improvement and development of the research efforts.

Concurrently, MINAG was engaged in preparing plans for upgrading ARDD into a proposed statutory body, then designated as the National Agricultural Research and Development Institute of Jamaica (NARDIJ). This was being undertaken simultaneously with the preparation of a Five Year Master Plan for Agricultural Research and Development.

The overall strategy of the proposed methodology is to:

- (i) identify major socio-economic problems for which GOJ has established strategies for solving;
- (ii) identify agricultural production strategies for crops and livestock implemented by MINAG towards solving the problems identified in (i);
- (iii) identify technical constraints for crop and livestock production identified in (ii);
- (iv) define research projects identified in (iii) for overcoming production constraints; and
- (v) Prepare projects on a ranked/prioritized basis.

105. PLANNING AGRICULTURAL FIELD EXPERIMENTS
by Vivian Chin, February 25, 1988.

A Paper presented at a MINAG Seminar on WRITING
TECHNICAL AND SCIENTIFIC PAPERS FOR PUBLICATION

The paper sets out the philosophy behind
experimentation, and the necessity for validating
inductive conclusions by precise deductive methods.

The paper then sets out -

- Purpose of Planning
- Steps in Planning
- Some important Aspects of Planning Field Experiments

106. ECONOMIC IMPORTANCE OF CASSAVA AS A CARIBBEAN
ALTERNATIVE IN ANIMAL FEEDS, AND SELECTION OF SUITABLE
CULTIVARS FOR THIS PURPOSE - A JAMAICAN EXPERIENCE
by A. C. MacDonald, IICA/Jamaica, August, 1988.

Within recent years there developed some recognition of the potential of cassava, a crop used since the Spanish occupation under Columbus but whose potential was never exploited.

GOJ's efforts to enhance its import-substitution programmes particularly for reducing the reliance on corn led to increased attention being focused on cassava.

This paper which is the final report on the IICA/Jamaica series on cassava dealt largely with the agronomics of cassava production, other presentations made concurrently having dealt with processing of cassava and its potential for replacement of corn in some livestock feeds. The publication focused largely on work done on cassava during 1987 and 1988.

Assessments were made of tests carried out at 14 selected localities across the island, growing selected varieties of cassava at varying elevations and under different rainfall levels and soil types.

The publication dealt with the historical development of cassava in Jamaica, varietal and adaptability trials, agronomic aspects of production, with particular reference to effects of rainfall, elevation and soil type, and presented a ranking of the varieties according to yields per acre.

The major advantages of cassava which were enunciated included: low input-costs, ability to perform well on soils having even low fertility, long storage life of the cassava, versatility of use and near-freedom from the praedial thief.

107. Miscellaneous Publication Series No. A2/JM-88-003, Series ISSN THE JAMAICAN SMALL SCALE FARMER - AN ANNOTATED BIBLIOGRAPHY by Tomas Mulleady and Rodney Rieks, IICA Jamaica, 1988.

The purpose is to assist users - professionals, researchers of Government, Private Sector and Non-Government Organizations - to have easier access to available technical information related to agriculture.

The Bibliography is arranged in five broad categories, viz.

- Economics (43)
- Rural Women, Farm Families and Development (19)
- Rural Sociology (10)
- Rural Poverty (4)

The literature search was limited to nine libraries. Copies of most documents are obtainable through the Publishers or through IICA Headquarters. The Bibliography was prepared by IICA/Jamaica with the collaboration of IICA's Inter-American Agricultural Documentation and Information Centre (CIDIA).

The information is based on the data obtained from:

- Abstracts of CAB (Commonwealth Agricultural Bureau)
- AGRICOLA, of Science and Education Administration Technical Information Systems (SEA/TIS)
- World Agricultural Information System (AGRIS) developed by UNFAO

The nine (9) Libraries researched were:

- Caribbean Agricultural Research and Development Institute (CARDI)
- Food and Agricultural Organization of United Nations (FAO)
- Inter-American Institute for Cooperation on Agriculture (IICA)
- Institute of Social and Economic Research (ISER, Ja.)
- Ministry of Agriculture (MINAG, Ja.)
- Scientific Research Council (SRC, Ja.)
- United Nations Educational and Social Committee (UNESCO)
- United States Agency for International Development (USAID)
- University of the West Indies (UWI), Mona, Ja.

108. SMALL BUSINESS TRAINING METHODS

by IICA/Jamaica Office Staff and IICA Peace Corps Staff as part of the Post-Hurricane Gilbert activities of the IICA Office in Jamaica. October, 1988.

The publication is aimed at trainers in a small business training programme for low-income micro-entrepreneurs. It is intended to be non-formal, voluntary, and to encourage reasoning and thinking rather than memorization.

Its coverage includes:

- Training Concepts
- Training Events
- Training Tools and Techniques including the use of Case Studies

109. IICA Miscellaneous Publication Series No: A2/JM-89-02

SMALL BUSINESS TRAINING TOOLS, First Edition

- Small Enterprise Development Project
by IICA Jamaica Office, March, 1989.

The Guide's coverage includes:

- Training Methods - concepts, events, tools and techniques
- Starting and Financing Guide (training hints and questions)
 - . Feasibility Study
 - . Financing including proposals for grants and loans
 - . Physical and Legal structures
- Operating Guide - covering aspects such as:
 - . Importance of management
 - . Organizing management
 - . Organizing production
 - . Record-keeping and stock-controlling
 - . Marketing
 - . Planning
 - . Budgeting
 - . Performance Evaluation
- Marketing Guide
 - . Definitions
 - . Important Activities of Marketing
 - . Hints on Personal Selling

This Guide for small business trainers provides a series of tools and techniques for improving training activities. It is designed to be used in conjunction with three (3) IICA manuals (Guides) prepared for micro-entrepreneurs titled:

- Starting and Financing a Small Business in Jamaica
- Operating a Small Business in Jamaica
- Marketing Jamaican Small Business Products

The materials in these manuals were originally developed by representatives drawn from the several agencies which constituted the Small Business Training Advisory Committee (SBTAC). IICA Jamaica Office co-ordinated the production of the manual.

110. IICA Miscellaneous Publication Series No. A2/JM-88-007 RECORDKEEPING FOR COMMUNITY REVOLVING LOAN FUNDS (CRLF) A GUIDE - Test Edition by IICA Office in Jamaica, January, 1989. IICA's preparation (Manual) titled STARTING AND FINANCING A SMALL BUSINESS IN JAMAICA was used as a major resource in the preparation of this publication.

This Guide to Record-keeping for Community Revolving Loan Funds (CRLF) was developed for those wishing to develop their own CRLF. It focuses also on:

- the feasibility of the borrower's request; and
- records which should be kept.

It was seen as being able to assist the Loan Committee in preparing a financial analysis of CRLF to ensure that it is being effectively operated.

The Manual was developed from local lessons and experiences and covers the following broad areas:

- The CRLF Concept
- Record-keeping for CRLF's
- The Borrower
- Records the Borrower should keep
- Financial Analysis of the CRLF
- Appendix, including various Forms, e.g.
 - . Loan Application
 - . Loan Agreement
 - . Calculation of Costs and Returns
 - . Monthly Report
 - . Profit and Loss
 - . Balance Sheet

A related IICA publication is the Community Revolving Loan Funds: Self Help in Local Development.

111. Miscellaneous Publication ISSN 0534-5391 # A2/JM-90-001
RECORDKEEPING FOR COMMUNITY REVOLVING LOAN FUNDS (CRLFs)
A GUIDE - First Edition
by Ellen Hill, Peace Corps Volunteer, Small Business
Management Specialist, IICA Office in Jamaica,
September, 1990.

A major resource input was the IICA Office in Jamaica
manual titled: "STARTING AND FINANCING A SMALL BUSINESS
IN JAMAICA".

The Publication was presented in 6 parts:

- Record-keeping for CRLFs
- Financial Analysis for a CRLF

- The Borrower
- Records the Borrower should keep
- Other Considerations
- Appendix, containing several Blank Forms

There was a description of several facets of a CRLF

The Revolving Loan Fund Concept
The Purposes of a CRLF
How the CRLF works

This guide to Record-keeping for CRLF was developed for
individuals or groups who wish to start their own CRLF.
It draws heavily on information presented in IICA's
publication - COMMUNITY REVOLVING LOAN FUNDS: SELF-HELP
IN LOCAL DEVELOPMENT EFFORTS.

112. IMPROVED TECHNOLOGY FOR YAM PRODUCTION
by Hyacinth Chin Sue, 1990

The International Institute for Tropical Agriculture
(IITA) introduced to Jamaica the Mini-Sett Technology
(largely for yams) in 1985. The technique was tested
on farms through the MINAG/IICA Cropping Systems
Project. Main agencies involved in the introduction of
the mini-sett technology were: University of the West
Indies (UWI), Mona Campus; MINAG and the Jamaica
Agricultural Research Programme (JARP).

The programme supports the National Yam Export
Development Project managed jointly by RADA (Rural
Agricultural Development Authority), IICA and the USAID.

This publication was designed to high-light the
application of the technology and describes the
different stages of mini-sett production.

The recommendations made are based on the findings from on-farm research using the yellow yam variety - Dioscorea cayenensis, within the traditional yam-growing areas of Jamaica.

Reference was made to the research work being undertaken towards the application of the technology to other varieties by the JARP.

The National Yam Export Development Project is a sub-project of the Agricultural Export Services Project funded by USAID. RADA is the implementing agency and IICA provides administrative support.

The Project aims at increasing the export of yams by promoting an improved system based on the mini-sett techniques, and on improving traditional cultural practices.

The focus is on areas located in the parishes of Trelawny, Hanover, Clarendon, Manchester, St. Ann, St. Catherine and St. Andrew.

The publication covers:

Overview

Applications of improved technology for yam production

National Yam Export Development Project

Project Justification

The technology nursery and field operations

113. IICA Miscellaneous Publication # ISSN - 0534-5391
A2/JM-91-001 ESTIMATED GROWTH IN DOMESTIC CROPS, AREA, YIELD AND PRODUCTION, 1969 - 1988
by Tomas Mulleady and Christopher Patzer, January, 1991.

The publication covered the potential for increasing agricultural production if yields for domestic food crops can be economically increased through dissemination of technical and economic information based on the best available technology in Jamaica.

The Publication presents analytical results derived from the performance profile of 50 crops. Data made

available from MINAG's Data Bank and Evaluation Division (DBED) and the Statistical Institute of Jamaica were used in estimating growth rates.

Regression analyses were applied in the determination of various coefficients. Estimated trends determined for the 20-year period 1969 to 1988 considered indicate that changes in area, yield and production were positive. For the period 1969 - 1978 the over-all trend was substantially increasing; followed by a decreasing trend for 1977 to 1988, including a substantial decrease for the sub-period 1984 to 1988.

114. POLITICAL AND ECONOMIC DIMENSIONS OF TECHNOLOGY TRANSFER

A paper prepared and presented by Dr. Armando Reyes Pacheco, IICA Representative in Jamaica, at the Second Annual Conference of the Jamaica Society for Agricultural Sciences (JSAS), March, 1991.

The paper provided a general overview of political and economic dimensions vis-a-vis technology transfer. A broad agenda is suggested for understanding some of the inter-relationships between agricultural extension and how it is affected by economic and public policy.

It indicated the necessity for scientists and/or policy-makers to re-define their roles as a means for enhancing the understanding of the complexity of the dimensions relating to agricultural development.

It suggested an inter-linkage conceptual framework which could contribute to improvements in the roles played by researchers, agricultural specialists, policy-makers and others interested in agricultural development issues.

The presentation was expected to enhance and continue the dialogue among the technical community and policy-makers. It outlined the dimensions of this inter-linkage as a conceptual framework on which to build. Comments were invited from conference participants.

The publication included coverage on:

The Context

Broad features of traditional and commercial agriculture as a means for setting the stage and the background for the presentation which followed. Of particular importance is the identification of major developmental problems and the consequences for agricultural development.

Points of Departure

The presentation looked at the institutional framework in general and some aspects of the Jamaican situation in particular (with reference to the newly created Rural Agricultural Development Authority (RADA) and activities being pursued for the early creation of a National Agricultural Research Institute (NARI)).

The paper alluded to remaining problems and constraints, the previous decline of MINAG capabilities in the areas of Research and Extension and the constraint inheritance for the new institutions.

The paper underscores the proposition that a growing realization must be stimulated regarding the political and economic dimensions of technology transfer.

Political and Economic Dimensions

The proposition is that a new analytical perspective to be tapped for technology generation and transfer relates to the political and economic dimensions. Agencies which are involved in technology transfer by public and private sectors were identified.

Political Dimensions

Main facets discussed relate to political dimensions in relation to:

- public policy - fiscal and legislative;
- public funding (decline in volume);
taxation which provides funding for agricultural extension;
- political priorities;
- agricultural policies;
- private sector agencies of technology transfer as reflected through various means including:
 - . joint ventures between public and private sectors;
 - . patents and licences;
 - . standards and regulations;
 - . plant and animal health;
 - . agricultural policies;

Economic Dimensions

Comments relating to the economic aspects of technology transfer involving the agricultural public sector were made on:

- agricultural product demand
- multi-national enterprises
- economic development, including support for specific crops, agricultural incentives, etc.
- economic policies, e.g. the granting of subsidies and fiscal regulations (relating to foreign investment and multi-national assistance).

It was concluded that Governments are likely to retain their influential role in the transfer of agricultural technology by way of public policy and less direct intervention, given an economic setting which is moving increasingly towards free market conditions. An

analytical perspective which incorporates the political and economic dimensions of agricultural technology transfer would enhance the understanding of this complex process, and would assist in accelerating agricultural development and growth.

115. IICA Miscellaneous Publication #ISSN 0534-5391
A2/JM-91-002 COST OF PRODUCTION OF FOOD CROPS
by the Farm Management Section MINAG and IICA,
July, 1991.

Thirteen (13) Cost of Production Surveys were conducted, one for each of the 13 Parishes listed as follows:

Clarendon, Hanover, Kingston and St. Andrew, Manchester, Portland, St. Ann, St. Catherine, St. Elizabeth, St. James, St. Mary, St. Thomas, Trelawny, Westmoreland.

Each publication - on a Parish basis - relates to the major crops produced.

The Survey was undertaken through the joint efforts of MINAG's Farm Management Division, its Data Bank and Evaluation Division and IICA.

The purpose of the Survey was to generate cost of production schedules for the main food/cash crops, by parish, and to refine the methodology for the collection of cost of production data.

The publication for each parish included:

- Purpose for undertaking the survey
- Definition of Terms used
- Cost components for food crops
- Cost of Production Tables

- Graphs
- Crop Yields
- Net Returns
- Rates of Return

116. A REPORT OF A FARMERS' MARKET FAIR IN JAMAICA
by Armando Reyes Pacheco, Representative, September, 1991.

A Farmers' Market Fair (FMF) was designed and implemented in collaboration with MINAG in November 1990, to devise a marketing system for small farmers in the project area of the Hillside Agriculture Sub-Project (HASP).

It was designed to bring producers and consumers into direct contact for marketing agricultural produce.

Several FMF's have been created since, with a view to enhancing their operational and institutional strengthening experiences.

This Publication covered the methodological aspects of an FMF, organization, administration, characteristics of producers and consumers and the nature of the various products.

Empirical evidence is provided relating to the producers and consumers who participated. The observation period was the last Saturday for every month for an eight (8) month period. The objective was to document the initial phases of the FMFs in Jamaica, using the experiences gained as a basis for developing a FMF's plan on a national scale.

The Report is largely descriptive. The coverage included:

The Farmers' Market Fair

- Definition
- Its Objectives
- Conceptual Framework
- Operations
 - . organization (location in the Portmore area of St. Catherine)
 - . administration, control and supervision
- Farmers - number, selection, origin
- Consumers - convenience, transport, usual market
- Produce - quantity, quality, prices, transport

Summary and Conclusions

The concept has been accepted by producers and consumers. Key components requiring critical analysis are producer-participation, transportation, base location and operations.

117. Miscellaneous Publication No. ISSN 0534-5391
A2/JM-91-006 FARM PLANNING - GUIDE PRINCIPLES AND CONCEPTS
by Jose Tomas Mulleady, October, 1991.

A series of training manuals, based on class notes used in training MINAG personnel, was developed jointly by MINAG (Farm Management Section) and IICA for enhancing MINAG's Extension Personnel skills in areas of farm planning and monitoring of farm plans.

The Manuals are designed to assist in improving farm management skills of small farmers.

Training in modules of three (3) one-day workshops covered the areas of farm plan preparation, investment analysis and control of the farm plan implementation.

There three (3) workshops covered areas as follows:

First Workshop

- . Exposure of participants to concepts of enterprise budgets
- . Development of the best farm plan, given farmers' goals and resources.

Emphasis was placed on plans using annual crops.

Second Workshop

- . Farm investment decision-making
- . Using concepts of capital budgeting and the Net Present Value method to compare investment alternatives for permanent crops.

Third Workshop

- . Control of farm plan implementation

Emphasis was placed on the presentation of a record-keeping system for monitoring the use of technical and financial aspects in improving farm operations.

The publication covers:

Farm Planning
Farm Planning Activities - goals; resources; short
intermediate and long-run planning and record-keeping

An Annex covers:

- Estimation Procedures of Depreciation
- Interest on Investment and Mortality Cost

118. Miscellaneous Publication Series ISSN 0534-5391
A2/JM-91-004 LONG RUN FARM PLANNING - INVESTMENT
ANALYSIS
by Jose Tomas Mulleady, October, 1991.

This Training Manual is a part of the series developed from class notes used in the training of MINAG's personnel prepared through the collaborative efforts of MINAG's Farm Management Division and the IICA Jamaica Office.

This Publication discusses:

1. Short-run planning

- . A Review
- . Making a Farm Plan and Farm Budget
- . Making Cropping Plans and Budgets

2. Long-run Planning, Implementation and Control

- . Long-run Farm Planning
- . Long-run Farm Plan Implementation
- . Comparison of Long-run investment Alternatives
- . Capital Budgeting
- . Planning Investments
- . Time value of money
- . Choosing Perennial Enterprises
- . Financial Feasibility

119. Miscellaneous Publication Series ISSN 0534-5391
A2/JM-91-005 FARM RECORD-KEEPING
by Jose Tomas Mulleady, October, 1991.

This publication is another in the Series developed from class notes prepared for training MINAG personnel by MINAG's Farm Management Division in collaboration with the IICA Jamaica Office.

The publication gives a background to and the necessity for Farm Record-keeping.

Its coverage includes the following:

- Introduction
- Use of Farm Records
- Accounting Methods
- The Accounting Period
- Components of a Farm Records System
- Control of the Farm Plan Implementation
- Management Information System

120. Miscellaneous Publication Series ISSN 0534-5391
A2/JM-91-006 FARM PLANNING - GUIDING PRINCIPLES AND CONCEPTS
by Jose Tomas Mulleady, October, 1991.

This publication continues the Series developed by the MINAG's Farm Management Division and IICA Jamaica for the training of MINAG personnel.

Its coverage includes:

- Introduction to Farm Planning
- Farm Planning
- Farm Planning Activities
 - . Definition of Goals
 - . Inventory of Resources
 - . Short, Intermediate and Long-run Planning
 - . Record-keeping
- Annex
 - . Estimation Procedures of Depreciation
 - . Interest on Investment and Mortality Cost

121. IICA Publication # ISSN - 0534-5391 # A2/JM-92/002
AN OPTION FOR CARIBBEAN AGRICULTURAL DEVELOPMENT
"TROPICAL BOUTIQUE AGRICULTURE" (TBA)
by Armando Reyes Pacheco, IICA Jamaica Representative,
May, 1992.

The Publication looks at the prospects of Agriculture in Latin America and the Caribbean (LAC) in relation to:

- global movements towards free-market oriented principles;
- Political and economic changes in the EEC;

- massive recent and continuing de-structuring of the former USSR;
- several initiatives, including the Caribbean Basin Initiative;
- North America Free Trade Agreement (NAFTA);

in terms of their likely impact on Caribbean Agricultural Development.

The delineation of the World into a number of economic (regional) blocs creates a compelling necessity for economic unification between the LAC countries. The Publication, however, deals with aspects which relate specifically to the Caribbean region.

The suggestion is that the Caribbean should pursue a Trade and Marketing liberalization thrust vis-a-vis the apparent general trend towards less restrictive World Trade which affects the Caribbean's economic strategies and performance.

Promising opportunities are envisaged for increasing agricultural trade as a means for enhancing over-all economic growth.

Availability and allocation of resources, backward and forward linkages, agro-industrial development and improved marketing strategies are included in the prerequisites for success. Emphasis is placed on the Economic Significance of the Agricultural Sector in the Caribbean Region. The broad objective is to improve the Region's competitive profile in World markets.

This necessitates a re-assessment of the performances of the Agricultural Sectors of the region, especially with respect to their degree of dependence/reliance on EEC or other favoured markets, the opening of new economic blocs in Eastern Europe, and the benefits or otherwise likely to be derived from the promulgation of NAFTA.

The products to be traded must be assessed/re-assessed in terms of their potential advantages and disadvantages. In spite of comparative advantages for a number of crops the Caribbean Region is handicapped by limited land availability. While there is scope for the improvement of the profile for traditional exports, the publication's summation is that the competitive edge for enhancement rests on the EXOTIC TROPICAL BOUTIQUE and/or GOURMET AGRICULTURE which considers a long and wide range of products, including fruits (soft and dried), spices, tubers, avocados and miscellaneous exotics.

The broad requirements are:

- (i) assessment of opportunities and limitations;
- (ii) outlook for specialized market niches; and
- (iii) focus on marketing strategies.

Existing TROPICAL BOUTIQUE AGRICULTURE (TBA) in the Caribbean needs to be enhanced and adopted as part of national policy. TBA should be considered within the ambit of an integrated prospective which includes agro-industrial development.

The conditions precedent include considerations on:

- demand and supply;
- technology development and transfer;
- production and productivity; and
- marketing and management.

122. IICA Publication #ISSN 0253-4746 #A2/JM-92/001
ANNUAL REPORT 1990-1991, IICA Office in Jamaica,
January 1992.

The Publication reports on IICA's activities in Jamaica for 1990 and 1991.

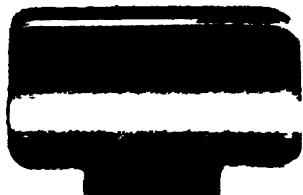
It provides an overview of the Jamaican economy, the agricultural sector with reference to land tenure, agriculture and the environment, and agricultural policy strategies.

Information is presented regarding IICA's technical cooperation strategy in Jamaica and the activities undertaken over the period (1990-1991), primarily in regard to:

- i) Support for generation and transfer of agricultural technology: The Cropping Systems Project.
- ii) Hillside Agricultural Sub-Project (HASP).
- iii) Technical Cooperation and Pre-Investment.
- iv) Institutional Diagnosis of RADA.
- v) Farm Management Training and Generation of Information.
- vi) National Yam Export Development Project.

Within this dynamic framework, IICA's strategy in Jamaica for 1992-1993 is designed to support the improvement of the agricultural institutional systems and to develop a more sustainable hillside agriculture programme to enhance agricultural policy development towards the modernization of the agricultural sector in Jamaica and rural well-being.





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