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Centro Interamericano de
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26 JUL 1995

IICA — CIDIA

**Review of the Agricultural Sector
in Guyana:**

VOLUME 1

RESULTS OF WORKGROUP DISCUSSIONS

23 - 24 August 1993

**Savannah Suite
Forte Crest Pegasus Hotel**

Ministry of Agriculture

Inter-American Institute for Cooperation on Agriculture (IICA)



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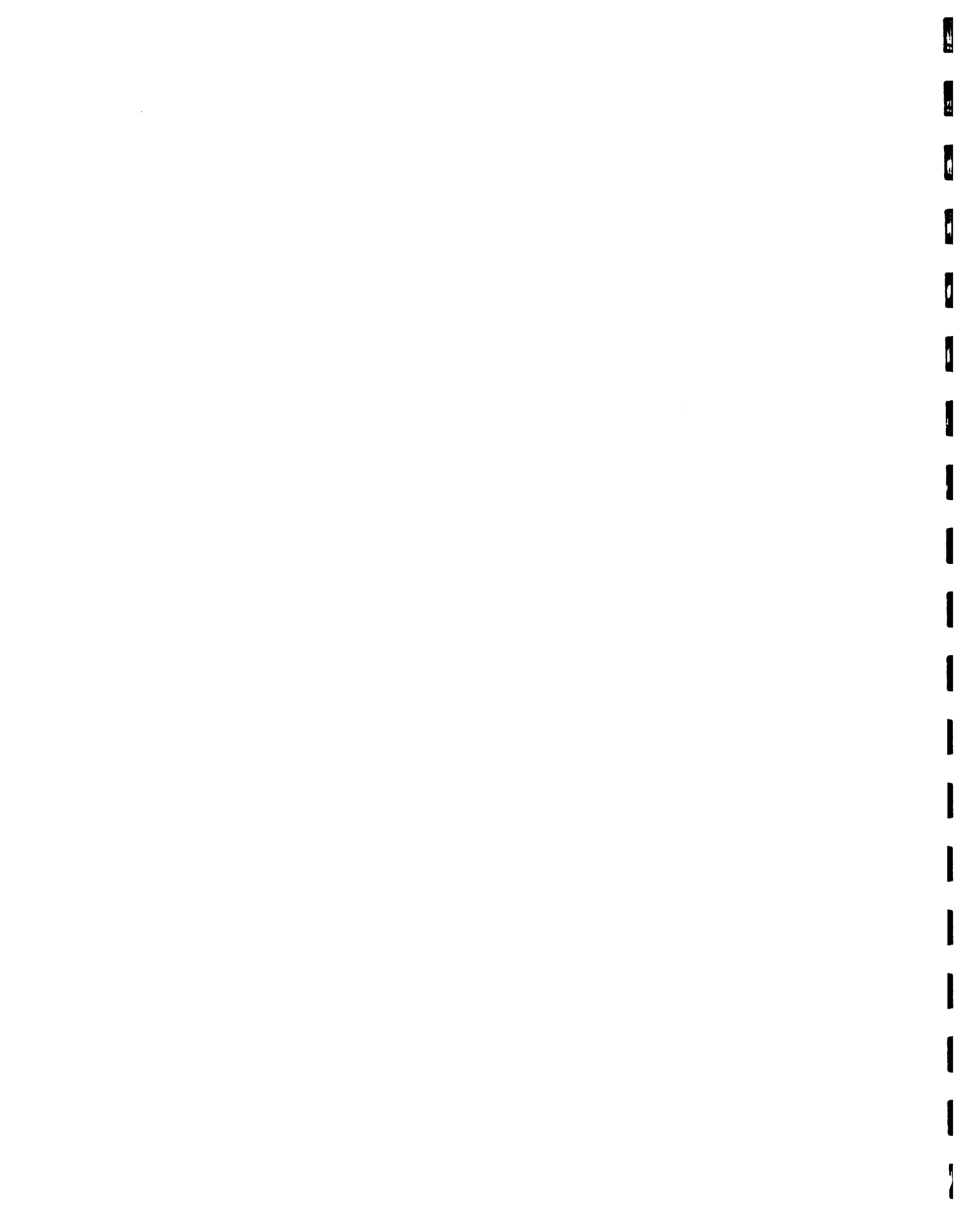
Ministry of Agriculture

Inter-American Institute for Cooperation on Agriculture (IICA)

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PART 1



FOREWORD

The Government of Guyana has taken the decision to give greater attention to the agriculture sector, with the dual purpose of ensuring an adequate food supply for all Guyanese and of increasing the quantities of food exports as a means of earning much needed foreign exchange.

In order to increase the production of quality food supplies at realistic prices, a great deal of planning is required. Of course, good planning requires accurate information on the agricultural sector, from which priority problems can be identified and effective actions and projects designed.

One of the basic constraints to determining sector policy and formulating development projects has been the scarcity of reliable information on the agriculture sector. In an attempt to overcome this situation the Ministry of Agriculture (MOA) and the Inter-American Institute for Cooperation on Agriculture (IICA) initiated a joint effort in March of 1993. The first activity focused on the collection and organization of available information on the agriculture sector. The documents presented in Part II of these proceedings represent the partial results of that effort. The second activity was the Workshop for the "Review of the Agricultural Sector in Guyana." This was successfully executed on 23-24 August, 1993. During that Workshop some 80 persons, representing the diverse sub-sectors, had the opportunity to review the thirteen papers and present their opinions in ten separate Workgroup Sessions. The results of those discussions are presented in Part I of these Proceedings.

The third and fourth activities of the MOA/IICA joint effort include two simultaneous actions. On the one hand, the Planning Department of the MOA will prepare the Agricultural Sector Policy Document, based in part on the information assembled in these Proceedings. On the other, IICA, with MOA support, will organize a one week training workshop on Project Identification and Formulation (November 1-5, 1993) during which detailed profiles of four projects identified in these Proceedings will be prepared.

It is recognized that the road from problem identification to problem solution is a long and difficult one. It is hoped that the information and ideas presented here will help to fill some pot holes and make the trip somewhat smoother one.

Prabhu Sookraj
Permanent Secretary
Ministry of Agriculture

Jerry La Gra
Representative in Guyana
Inter-American Institute for
Cooperation on Agriculture

ACKNOWLEDGEMENTS

Any event of this nature requires the participation and support of a large number of organizations to make it successful. In this case the support came from national, regional and international organizations.

The Ministry of Agriculture (MOA) was a joint sponsor of the Workshop and technical support was provided by its Departments of Planning, Crops and Livestock and Fisheries. The Inter-American Institute for Cooperation on Agriculture (IICA) provided financial assistance and coordinated the event. The MOA and IICA both provided secretarial services which were greatly appreciated.

Other institutions providing technical support in the preparation of papers included the National Agriculture Research Institute (NARI), the New Guyana Marketing Corporation (GMC) and the local office of the Regional based Caribbean Agriculture Research Development Institute (CARDI).

Special thanks is due to the staff of the Forte Crest Hotel who provided high quality services and a pleasant environment for the Workshop.

Finally, and most importantly, thanks to the more than 80 participants (Annex 1) from the public and private sectors who took the time from their busy schedules to attend the Workshop for two days and remain in their respective discussion group late into the evening.

Prabhu Sookraj
Permanent Secretary
Ministry of Agriculture

Jerry La Gra
Representative in Guyana
Inter-American Institute for
Cooperation on Agriculture

LIST OF ACRONYMS

AGRIS	International Information System in the Agricultural Sciences
AGRINTER	Inter-American Agricultural Information System for Latin America and the Caribbean
BEV	BEV Enterprises
CAGRIS	Caribbean Agricultural Research Information System
CAMIS	Caribbean Marketing Intelligence Service
CARAPHIN	Caribbean Animal and Plant Health Information Network
CARDI	Caribbean Agricultural Research and Development Institute
CARPIN	Caribbean Patent Information Network
CARSTIN	Caribbean Science and Technology Information Network
CARTIS	Caribbean Trade Information System
CAS	Current Awareness Service
CATIS	Caribbean Agricultural Technical Information Service
CBN	Caribbean Biotechnology Network
CDB	Caribbean Development Bank
CEIS	Caribbean Energy Information System
CESO	Canadian Executive Service Overseas
CFRAMP	CARICOM Fishery Resource Assessment and Management Programme
CHPA	Central Housing and Planning Authority
CIDA	Canadian International Development Agency
CIDIA	Inter-American Centre for Agricultural Documentation, Information and Communication
CNIRD	Caribbean Network for Rural Development
COPESCAL	Commission for Inland Fisheries of Latin American and the Caribbean
CRIN	Caribbean Rice Improvement Network
CTA	Technical Centre for Agricultural and Rural Cooperation
DANIDA	Danish International Development Agency
DOF	Department of Fisheries
EEC	European Economic Community
EEZ	Exclusive Economic Zone
EI\WDFCSL	Essequibo Islands\West Demerara Fishermen's Cooperative Society Limited
E\PFCSL	Essequibo\Pomeroon Fisheries Cooperative Society Limited

FAO	Food and Agriculture Organization
FMP	Fisheries Management Plan
FTAP	Fisheries Technical Assistance Project
FZ	Fishery Zone
GAHEF	Guyana Agency for Health Sciences Education and Food Policy
GAIBANK	Guyana Agricultural and Industrial Development Bank
GBTI	Guyana Bank for Trade and Industry
GDP	Gross Domestic Product
GFL	Guyana Fisheries Limited
GGFCSL	Greater Georgetown Fishermen's Cooperative Society Limited
GLA	Guyana Library Association
GMC	Guyana Marketing Corporation
GNBS	Guyana National Bureau of Standards
GNCB	Guyana National Cooperative Bank
GNRA	Guyana Natural Resources Agency
GNEC	Guyana National Engineering Corporation
GOG	Government of Guyana
GREB	Guyana Rice Export Board
GRMEDA	Guyana Rice Millers and Exporters Development Association
GRMMA	Guyana Rice Milling and Marketing Authority
GSA	Guyana School of Agriculture
GS&TC	Georgetown Seafoods and Trading Co. Ltd.
GUYMIDA	Guyana Manufacture and Industrial Development Association
GUYSUCO	Guyana Sugar Corporation
IAEA	International Atomic Energy Agency
IAST	Institute of Applied Science and Technology
IDB	Inter-American Development Bank
IDRC	International Development Research Centre
IFAD	International Fund for Agricultural Development
IICA	Inter-American Institute for Cooperation on Agriculture
INFOTERRA	Information System on the environment
IPED	Institute for Private Enterprise Development
LAC	Latin America and Caribbean
LIDCO	Livestock Development Company

MMA/ADA	Mahaica/Mahaicony/Abary Agricultural Development Authority
MOA	Ministry of Agriculture
MPFL	Marine Food Products Ltd.
MPLIS	Multi-purpose Land Information System
NAIN	National Agricultural Information Network
NARI	National Agricultural Research Institute
NBIC	National Bank of Industry and Commerce
NDDP	National Dairy Development Programme
NEDECO	Netherlands Engineering Consultants
NEOCOL	National Edible Oil Company Ltd
NFP	National Focal Point
NHS	Noble Home Seafoods
NPRGC	National Paddy and Rice Grading Centre
NSRC	National Science Research Council
RDC	Regional Democratic Councils
REDBIO	Technical Cooperation Network on Caribbean Plant Biotechnology
RFCSL	Rosignol Fishermen's Cooperative Society Limited
RPA	Rice Producers Association
RTE	Research Training Extension
SAPIL	Seals and Packaging Industries Ltd
SDI	Selective Dissemination of Information
SIMAP	Social Impact Ameiloration Programme
TED	Turtle Excluder Device
TEPL	Tropical Food Products Limited
UCFCSL	Upper Corentyne Fishermen's Cooperative Society Limited
UNESCO	United Nations Educational, Scientific and Cultural Organization
UG	University of Guyana
USAID	United States Agency for International Development
UWI	University of Gauyana
WECAFC	Western and Central Atlantic Fisheries Commission

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INTRODUCTION

The agricultural sector has been undergoing rapid change in recent years. As a result of major changes in government policy - dictated by the country's poor record of economic growth and a mounting debt burden - many regulations which previously restricted production and trade have been reversed or eliminated. On the other hand, government's fiscal position has led to a real reduction in the level of support provided to the sector. Although the bilateral and multilateral funding agencies have continued to provide much needed assistance to the sector, the financing gap remains quite large, particularly in respect of infrastructure rehabilitation, and technology development. Complicating matters further is the fact that the capacity of the public sector to absorb external assistance has been seriously eroded due, in part, to the low level of incentives to personnel and the paucity of facilities available.

It is an appropriate time to review the performance of the sector in detail with a view to formulating policies, programmes and project guidelines for the medium term.

The Ministry of Agriculture, in particular its Planning Division, is charged with the responsibility of providing government with advice on policy and programme directions for the sector. The Inter-American Institute for Cooperation on Agriculture (IICA) has a mandate to assist government in devising plans, policies and programmes and has been working with the Ministry of Agriculture in this regard.

Consequently, MOA/IICA have organized this Workshop as a forum to facilitate the analysis of each major agricultural sub-sector (with the exception of sugar).

Each presentation will attempt to:

- describe the present situation in the respective sub-sector;
- identify principal problems, and
- propose project and policy ideas.

Following the presentations, work groups will:

- review the presentations;
- define policy objectives for each sub-sector; and
- recommend actions.

The major results of the workshop are expected to be:

- clearly stated recommendations to government on policies and approaches to addressing the various problems identified; and
- recommendations on project areas and strategies for consideration in the short and medium-term.

WORKSHOP AGENDA

August 23, 1993:

- 8:00am **Registration**
- 8:45 am **Opening Session:**
 - Welcome by Mr. Prabhu Sookraj, Permanent Secretary, Ministry of Agriculture
 - Welcome by Mr. Jerry La Gra, IICA Representative in Guyana
 - Opening Address by Hon. Reepu Daman Persaud, Minister of Agriculture
- 9:15 am **Institutional Structure and On-going Projects, Nigel Durrant**
- 10:00 am **The Rice Sub-sector, Rachel Stringfellow**
- 10:40 am **Break**
- 11:00 am **Non-Traditional Crops, Harold Ramdin**
- 11:40 am **Marketing, Alton Daw**
- 12:20 pm **LUNCH**
- 1:30 pm **Livestock Sub-sector, Charles Carmichael**
- 2:10 pm **Fisheries Sub-sector, Terrence Phillips**
- 2:50 pm **Meat and Fish: Production, Consumption and Prices, Mustaq Ahmed**
- 3:30 pm **Refreshments**

4:00 pm **Work Groups**

5:30 pm **End of day**

August 24, 1993:

- 8:30 am **Plenary session: presentation of findings of Work Groups**
- 9:20 am **Water Management: Drainage & Irrigation, Rachel Stringfellow**
- 10:00 am **Refreshments**
- 10:20 am **Land, Nigel Durrant**
- 11:00 am **Rural Finance, Rachel Stringfellow**
- 11:40 pm **Rural Development, Cromwell Crawford**
- 12:20 pm **LUNCH**
- 1:00 pm **Generation & Transfer of Technology, Julian Seaton**
- 1:40 pm **Information Systems in Guyana, C.C. Osigwe**
- 2:15 pm **Refreshments**
- 2:30 pm **Work Groups**
- 4:00 pm **Plenary Session to present findings of Work Groups**
- 5:00 pm **Closing Address, Permanent Secretary, Ministry of Agriculture**

OPENING CEREMONY

WELCOME AND OPENING REMARKS

**BY MR. PRABHU SOOKRAJ, PERMANENT SECRETARY,
MINISTRY OF AGRICULTURE**

It is with a great deal of pleasure that I welcome you to this seminar. As you would have been told, the main purpose is to provide a forum for the many agriculture-related organizations in the public and private sectors to give their views on the way forward for the sector.

Agricultural development has been and will continue to be a major focus of government's efforts. This sector has continued to be the backbone of the economy and will continue to provide the impetus for our economic recovery for many years to come.

Since becoming Permanent Secretary of the Ministry of Agriculture late last year, I have been concerned with three major things. These are:

- 1) the formulation and management of projects
- 2) the capacity of institutions which support the sector; and
- 3) the formulation of policies for the sector

With regard to projects, I have been concerned with the degree to which they have been meeting their objectives; the degree to which greater efficiencies can be effected, and the extent to which the projects are responding to the priority needs of the sector. It is no secret that some projects, on which significant sums have been spent, have not met their objectives. To a large extent, this has been due to the weak capacity of government to formulate and monitor these projects. In this connection, the Ministry now has an Agricultural Project Cycle Unit which will be responsible for keeping track of all projects currently being implemented. The idea is that all problems encountered in implementation should be speedily resolved. In addition, the unit would assist in formulating new projects through discussions with funding agencies and facilitating preparatory work.

Secondly, the public sector institutions which serve the agricultural sector - of which the Ministry of Agriculture is the main actor - all suffer from severe constraints in funding and technical capability. In addition, over the years, there has been a great deal of overlapping of functions and some loss of direction by some of these bodies. In a situation of such severe funding constraints, we cannot afford such duplication of effort. More importantly, unless the various organs of government are clear as to their functions, confusing signals will be given to farmers and productivity will suffer.

Some of the areas in which urgent institutional reform is needed are:

- management of the drainage & irrigation system;
- sea defences;
- the research, extension and training system;
- the land management system;
- the system for financing agricultural activities; and
- the marketing infrastructure and information system.

The third area has to do with government's agricultural policy framework. Although there has been fairly radical policy reform at the macroeconomic level, agricultural policy has lagged behind and has been somewhat passive in its reaction to these wide-ranging changes. It is recognized that the recent changes in macroeconomic policy have, generally, been to the benefit of the sector. Producers are now able to receive the full value for their output and have been freed of the restrictions which had been imposed on them for a number of years. But, these very policy changes have helped to expose the underlying weaknesses in the country's infrastructure and marketing systems.

With the transfer of many production-related activities to the private sector, government's interventions will have to be much more focused on the improvement in the legal-institutional framework which will facilitate greater investment and productivity in the sector. To respond to these challenges, we must enhance our ability to monitor developments in the sector, encourage dialogue with all concerned; properly analyze the results; and arrive at correct formulations for policy and programming.

The Ministry will, before the end of this year, be producing a programme document which will set out our view of preferred directions for the medium term and priority programme areas for our attention.

It is for the above reasons that this seminar assumes such importance. This is an inter-institutional effort which combines the skills of the public and private sectors and is aimed at:

- compiling decision-making information on the important issues facing the sector;
- identifying solutions; and
- identifying priority projects.

As such, the Ministry of Agriculture places great store on the advice which it receives from IICA, other technical assistance bodies and funding agencies in the further development of government's plans and policies.

As a result of this event, government will have at its disposal information and recommendations on all the areas covered. This will greatly assist in the on-going process of formulating new plans and programmes for the development of agriculture in Guyana.

OPENING REMARKS

BY MR. JERRY LA GRA, IICA REPRESENTATIVE

THE NEED FOR SYSTEMATIC RURAL DEVELOPMENT

During the two decades of 1970 - 1990, the number of people living in poverty in Latin America and the Caribbean increased at an average annual rate of 4.1% (IDB, *Confronting Rural Poverty in LAC*). Poverty now affects over 200 million people in the Americas, nearly 50% of the total population. A recent study in Guyana of 743 rural households (IICA/IFAD) showed that only 35% lived above the poverty line [G\$60,000 (US\$480) per capita]. Another 35% lived in moderate poverty and 30% lived under conditions of critical poverty. Under the above conditions, the rural poor face three fundamental problems:

- inadequate employment opportunities in farm and non-farm activities;
- inadequate nutrition, poor health, lack of education and other basic services;
- inadequate levels of organization caused by poor management skills and limited opportunities for training and other types of assistance.

Given this distressing situation, something is obviously wrong in the development process. Large investments in time and money are not having the desired impact.

Most institutions seem to agree that a very high percentage of their projects do not achieve their desired goals. This is a nice way of saying that too many of their projects fail. Research carried out by diverse development institutions have identified a number of reasons for project failures. Common among them are causes such as: poor participation of beneficiaries and implementors in the design stage; lack of concern with the sustainability of the projects; inadequate attention given to market opportunities; partial analysis of complicated systems; failure to involve all the key participants; omission of policy issues; short-term nature of projects; failure to monitor and evaluate, among others.

To avoid repetition of mistakes and more failed projects, the public and private sectors and support organizations must work towards common goals in a well coordinated joint effort. This Workshop is one contribution towards integration. It has helped to not only collect a large amount of information and organize it into one document, but it has brought together a large number of sector specialists to analyze the information, reach conclusions and make recommendations as to possible solutions. While the Proceedings from this Workshop will become a valuable reference document, it is anticipated that it will soon be followed by an Agricultural Sector Policy Document and a number of rural sector development projects, which will not only be sustainable but will have a significant impact on reducing the level of poverty in Guyana.

IICA is very pleased to have had the opportunity to help organize this Workshop and looks forward to give continued support to the development of the agricultural sector of Guyana.

NOTES FROM THE OPENING ADDRESS

**BY HON. REEPU DAMAN PERSAUD,
MINISTER OF AGRICULTURE**

I would like to welcome all the representatives from the Ministry of Agriculture, other entities within the public sector involved with agriculture, representatives from the private sector and producer organisations and representatives from the international donor agencies.

In the spirit of the present government's commitment to open government, we are pleased to have present at the Workshop such a broad cross section of representatives from the agricultural sector in Guyana.

The purpose of this Workshop is to hear and discuss various papers on the Agricultural Sector. This will assist the ongoing process in the Ministry of analysing the current situation in agriculture and developing an agricultural programme and policies appropriate to the country's needs.

Government understands that the diversity of the sector and the complexity of the issues makes extensive consultation essential in the development of successful agricultural policies.

I wish to call to your attention the recent positive indicators of growth in the sector, particularly in sugar and rice.

It was recorded at the Annual General Meeting of Guysuco on the 18th August, that the company recorded in 1992 its highest profit since the nationalisation of the sugar industry.

In the rice sector, production reached 105,000 tons of rice for the first crop of this year, 1993, compared to only 81,000 for the same period in 1992. Similarly, exports of rice have increased, from 46,000 tons for the first half of 1992, valued at US\$14 million, to 60,000 tons this year, with a value of nearly US\$17 million.

The Agricultural Sector continues to enjoy the support of international donor agencies. Of particular note is the assistance being provided by several institutions - the EEC, the IDB, the World Bank, PL480 and the CDB - in the rehabilitation of the Sea Defences, which play such a vital role in guaranteeing the livelihood of thousands of Guyanese farmers. Together these agencies will finance the rebuilding of 40km of sea defences.

There are many other important projects. The FAO and the UNDP are assisting the National Seed Programme; CIDA is providing assistance to the fishing industry; the IDB is assisting the reactivation of the rice and sugar industries as well as supporting initiatives in drainage and irrigation. Drainage and irrigation rehabilitation is also supported by the EEC and PL480 funds. IFAD continues to support the Integrated Rural Development programme in Region 3 and CARDI continues to carry out important research work on livestock and in the intermediate savannahs. IICA is assisting my Ministry in crop and livestock development and most recently in the area of planning.

Despite positive indicators, the government is fully aware of underlying institutional and infrastructural weaknesses which question the sustainability of recent positive trends. Government has inherited these problems, which are the direct result of many years of economic stagnation and decline, leading to underinvestment in agriculture by both the public and private sectors.

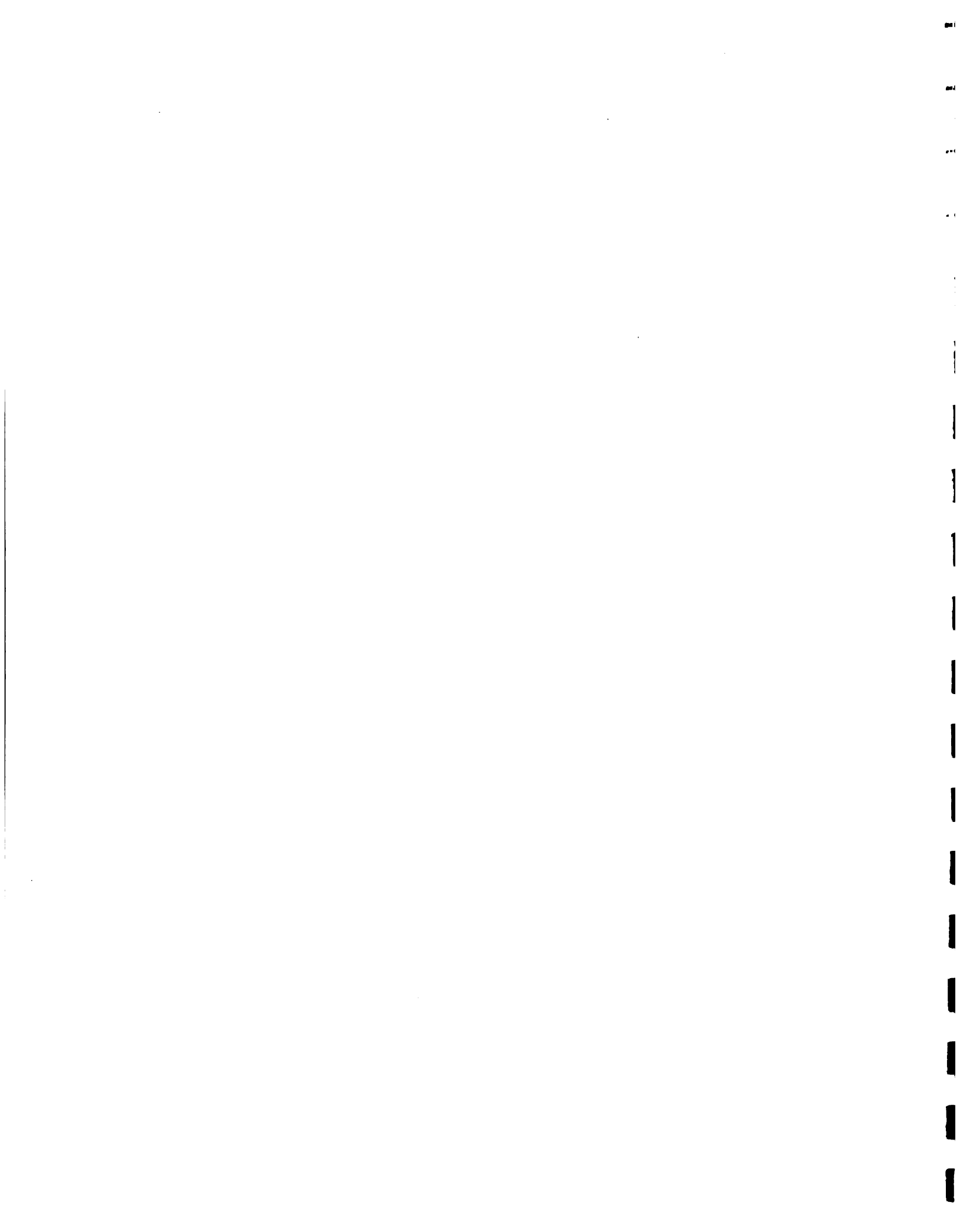
The recent problems encountered in supplying the Jamaican market highlights the challenge facing the government: the productivity and quality of much Guyanese produced rice is too low to allow profitable exports. This in turn highlights the need for major initiatives to be undertaken to improve vital services such as extension, drainage and irrigation and seed distribution, which will ensure higher quality and productivity in the future.

Looking more broadly across the sector, initiatives need to be taken to improve the flow of financing to rural producers. Marketing infrastructure needs improvement in many areas and a major initiative is also required in the area of land titling.

As a government committed to promoting agricultural development, we are determined to face these challenges head on and work hard to develop the right policies to deal efficiently with them. Government will also do all it can to seek further assistance from the international donors to implement new programmes and projects.

The process of developing effective policies is dependent on generating accurate information and allowing a variety of views and perspectives to be considered. That is why this Workshop is so important as it is bringing together a great deal of experience and expertise. We hope that it will produce some very concrete results in terms of policy and project ideas which will guide the development of the agricultural sector.

I would like to thank the Planning Department for working so hard with IICA to organise this event. I would also like to thank IICA's staff and consultants for their very important contribution to the Workshop as can be seen in the numerous documents. Finally, I would like to thank the presenters of the various papers and all those who have come to participate today. I hereby declare this Workshop open and look forward to reviewing the results of your deliberations.



PART 2

RESULTS OF WORKGROUP DISCUSSIONS

**RESULTS OF WORKGROUP DISCUSSION ON
LAND**

Chairperson: A. K. Datadin

Rapporteur: Dr. Mushtaq Ahmed

Members of Group:

Patricia Headley	D. Sookraj
Debra Marks	Harold Ramdin
Nigel Durrant	Bhupandra Giri
Jagnarine Singh	Peter Davis
Francis Persaud	

A: PRINCIPAL PROBLEMS IDENTIFIED WHICH IMPACT NEGATIVELY ON THE EFFICIENT USE OF LAND

1. Inefficient administration of land due to:
 - a) poor storage and retrieval of information for decision making;
 - b) too few qualified human resources due to poor economic incentives;
 - c) Lands & Survey system is too disaggregated;
 - d) poor communication among local management agencies;
 - e) inappropriate criteria in determining size of holdings in Land Development Schemes.

2. Uncertain land tenure as a result of:
 - a) present status of some land is unknown;
 - b) records of land holdings are poorly organized;
 - c) issuing of titles/leases is a very slow process;
 - d) rental agreements lead to illegal subletting;
 - e) little or no monitoring of land contracts;
 - f) Government policy is unclear.

3. Low efficiency in land use due to:
 - a) large amounts of idle land;
 - b) land often used for purposes other than for which it is leased;
 - c) little organized information on appropriate land use;
 - d) farmers unwilling to invest in land for which the tenure is uncertain;
 - e) banks reluctant to provide credit to farmers without title as collateral.

4. Poor communication and coordination between the diverse land related agencies which is a result of:
- a) a large number of organizations with land related responsibilities, e.g. Forestry Commission, Parks Commission, GNRA, etc.;
 - b) no formal line of communication exists between these diverse bodies;
 - c) each organization has its own priorities and modus operandi.

B. POLICY OBJECTIVES AND REQUIRED ACTIONS

POLICY OBJECTIVES

1. To Improve efficiency of land administration

REQUIRED ACTION TO ACHIEVE SUGGESTED POLICY OBJECTIVES

- 1.1 Review of all present rates/fees and their collection:
 - conduct study to make recommendations;
 - short term projects.
- 1.2 Eliminate backlog of applications and provisional leases/freehold titles:
 - improve record system;
 - strengthen Lands and Surveys, including provision of equipment.
- 1.3 Strengthen Lands and Surveys and National Registry:
 - formulate project for institution building;
 - implement project to provide emoluments, equipment, training of personnel, etc.
- 1.4 Consolidate Lands and Surveys system:
 - unify the system.
- 1.5 Improve coordination of diverse land management agencies:
 - set up coordinating body including setting up of formal coordinating council.
- 1.6 Improve the basis for setting size of holdings:
 - carry out study to determine economic size for various usages.

- 1.7 Document/verify present occupants and owners of land:
 - conduct surveys to identify owners and leases holders.
- 1.8 Facilitate access to State land through leases:
 - strengthen ability of L&S to promptly issue titles/leases.
- 1.9 Eliminate illegal subletting:
 - implement realistic rental contracts;
 - monitor land leases.
- 2. To make efficient use of available land resources
 - 2.1 Reduce the incidence of idle land:
 - General inventorization to identify and quantify amount of idle land and its temporal characteristics;
 - Enforce conditions of lease;
 - Enforce legislation (called idle Land Legislation);
 - review and enforce land taxation.
 - 2.2 Improve the orderly use of land:
 - practice zoning.
 - 2.3 Improve land information system:
 - conduct surveys;
 - carry out land inventory;
 - establish multipurpose geographic information system.

C.

PRIORITY ACTIONS AND PROJECTS

PRIORITY PROJECTS

<u>Name</u>	<u>Objective</u>	<u>Implementor</u>
Land Policy Project	To improve policy environment for land management	Min. of Agriculture
Improvement of Land Registry System	To improve the storage and retrieval of information on land and implement Multi Purpose Geographic Information System (MPGIS).	Min. of Agriculture

**RESULTS OF WORKGROUP DISCUSSION ON
DRAINAGE AND IRRIGATION**

Chairperson: Sheik Yussuff

Rapporteur: Leroy Charles

Members of Group: Guychandra Singh
Rachel Stringfellow
Charles Carmichael
Jules E. Chabral
Pieter Brandjes

A: PRINCIPAL PROBLEMS IDENTIFIED WHICH IMPACT NEGATIVELY ON EFFICIENT MANAGEMENT OF DRAINAGE AND IRRIGATION SYSTEMS

1. Poor management of Drainage and Irrigation system due to:
 - a) division of responsibility for operation and maintenance between different entities;
 - b) inadequate human resources at all levels (managers, engineers, rangers, accountants) as a result of poor financial incentives within the public sector;
 - c) inadequate logistical support for technical and administrative staff.
2. Low levels of rate collection as a result of:
 - a) division of responsibility for collection among different entities;
 - b) inadequate staff;
 - c) non-cooperation of users because of poor level of service provided;
 - d) inadequate legal provisions and enforcement mechanisms to deal with non-payment;
 - e) absence of up-to-date information on land tenure, owners/operators, payments made, etc.
3. Poor user participation in the design, operation and maintenance of the system.

B.

POLICY OBJECTIVES AND REQUIRED ACTIONS

POLICY OBJECTIVES

**REQUIRED ACTION TO ACHIEVE
REQUIRED POLICY OBJECTIVES**

1. To provide and maintain a self-financing, efficient Drainage and Irrigation management system.

1.1 Review and enact legislation which will facilitate:

- the establishment of autonomous and self-sustaining regional agencies responsible for all aspects of the D&I system;
- improved rate collection;
- legal provisions to protect D&I works and enforce payment of rates.

1.2 Obtain financial assistance from donor agencies to:

- establish the new agencies;
- fund the initial rehabilitation of D&I works during the phase-in period.

1.3 Develop a strategy for the operation of the new agencies which will ensure they provide an efficient service. This will involve:

- offering salaries and benefits which will attract the skilled staff required;
- implementing a continuous training programme to improve managerial and technical skills;
- introducing some degree of performance related pay for staff;
- establishing effective lines of communication between service users and providers.

1.4 Provide and strengthen D&I user associations by:

- integrating farmers in the decision making process;
- training farmers in organization and management.

2. To ensure a more efficient use of available resources

2.1 Ensure security of local tenure by issuing long-term leases.

2.2 Ensure measures to prevent fragmentation of land holdings.

2.3 Provide leases based on farmers' experiences and capability.

2.4 Establish an integrated land use database system.

2.5 Evaluate efficiency of each system and redesign inefficient systems where feasible.

C.

PRIORITY ACTIONS AND PROJECTS

PRIORITY ACTIONS

<u>Name</u>	<u>Objective</u>	<u>Implementor</u>
1. Review of existing legislation by expert.	To determine needs for modification.	FAO, IDB, Consultant
2. Preparation of proposal for new legislation.	To establish legal base for development of an effective Drainage and Irrigation Management System.	FAO, IDB, Consultant
3. Preparation of project proposal for the establishment of autonomous authorities.	To establish an effective institutional structure for D&I management.	IDB, Consultant
4. Surveys in priority D & I systems.	To determine how best to integrate farmers into the development process.	UG, IDS, IICA, Local Consultants, Farmers.

5. Inventory of maps, plans, reports and other information by D & I system.	To assemble all existing information in common location and determine needs for additional information.	Ministries, Consultants. Regional Administration.
6. Feasibility studies of potential for full cost recovery of operation and maintenance of respective systems.	To determine feasibility of respective systems.	MOA, Consultants.

PRIORITY PROJECTS

<u>Name</u>	<u>Objective</u>	<u>Implementor</u>
1. Improving the operation and maintenance of Irrigation and Drainage Systems.	To establish effective mechanisms and systems for the efficient re-habilitation, Operation and Maintenance of D&I Systems with full cost recovery.	Autonomous bodies to be created and established.

RESULTS OF WORKGROUP DISCUSSION ON

RICE

Chairperson:	Charles Kennard	
Rapporteur:	Dan Singh	
Member of Group:	Jainarine Singh; Ramsahai Ramnarain; Rafudeen Nizamudin; Greg Rawlins; Ken Croal; John Browman; Beni Sankar;	B. Doobay Leroy Charles Francis Persaud D.B. Singh A.K. Datadin Roy Mangru Carol Walcott

A: PRINCIPAL PROBLEMS IDENTIFIED AND THEIR CAUSES WHICH IMPACT NEGATIVELY ON THE PRODUCTION AND MARKETING OF RICE

The central problem is the difficulty and uncertainty of the marketing of rice. This is caused by three other problems which are:

1. Low productivity and high per tonne costs of production due to:
 - a) inadequate machinery and equipment for land preparation;
 - b) inadequate Drainage and Irrigation management;
 - c) inadequate crop husbandry;
 - d) inefficient milling equipment, and
 - e) high transport and marketing costs.

2. Low quality of final product resulting from:
 - a) inadequate availability of quality seed;
 - b) poor water control;
 - c) poor crop husbandry;
 - d) inadequacy of drying, cleaning and storage facilities at rice mills, and
 - e) inadequate milling equipment and insufficient grain sorters.

3. Poorly developed marketing strategy as a result of:
 - a) insufficient market intelligence;
 - b) improper handling practices;
 - c) inadequate storage and transportation, and
 - d) high costs of shipping.

B.

POLICY OBJECTIVES AND REQUIRED ACTIONS

POLICY OBJECTIVES

**REQUIRED ACTIONS TO ACHIEVE
SUGGESTED POLICY OBJECTIVES**

- | | |
|---|---|
| <p>1. To lower costs of production and increase yields of rice.</p> | <p>1.1 Improve the availability of seeds:
- activate NARI, and
- improve seed multiplication and distribution system.</p> <p>1.2 Improve cultural practices of rice farmers:
- major new initiative in extension;
- orient research to real needs of farmers;
- improve access to machinery and farm inputs, and
- improve access to credit.</p> <p>1.3 Improve drainage and irrigation management:
- radical restructuring of organization & management, and
- develop system for cost recovery.</p> <p>1.4 Reduce the costs of farm inputs:
- remove duties and taxes, and
- promote bulk purchasing.</p> |
| <p>2. To improve the quality of Guyana rice</p> | <p>2.1 Improve the quality of genetic material.</p> <p>2.2 Improve the seed distribution system.</p> <p>2.3 Improve water management:
- restructuring of key institutions, and
- integrating farmers into the management system.</p> <p>2.3 Improving farmer's cultural practices:
- strengthening extension service;
- development of appropriate technological packages, and
- training in improved post harvest handling.</p> |

**3. To improve the marketing system
for Guyana rice**

**2.4 Improvement of processing and storage
facilities:**

- donor financial assistance for on-lending to purchase cleaners, driers, silos etc.;
- improve husk powered mills, and
- training programs for millers.

**3.1 Develop an effective market intelligence
system:**

- determine information needs;
- organization of computerized system, and
- training of technical staff.

3.2 Diversify rice products:

- investment in parboiling operations, and
- improved packaging.

3.3 Establish fiscal incentives:

- revise tax on European exports, and
- revise import duties on farm inputs and equipment.

3.4 Improve market infrastructure:

- joint ventures to improve wharf/storage at Georgetown and Berbice.

3.5 Review of Least Cost shipping options.

C.

PRIORITY PROJECTS

<u>Name</u>	<u>Objective</u>	<u>Implementor</u>
1. Improvement of research, seed distribution and extension services	To establish an effective system for improving the cultural practices of rice farmers.	MOA, NARI, Private Sector
2. Upgrading of milling sector, including new technologies for parboiling and packaging	To obtain necessary financing through donor assistance or joint ventures to develop milling sector with competitive advantages.	Private Sector
3. Radical restructuring of drainage and irrigation system	To establish effective mechanisms and systems for the efficient rehabilitation and maintenance of D & I Systems with full cost recovery and farmer participation.	MOA
4. Upgrading wharf facilities (joint government/private sector initiative)	To provide appropriate terminal storage and loading facilities for rice exports.	Government/ Private Sector

RESULTS OF WORKGROUP DISCUSSION

NON-TRADITIONAL CROPS

Chairperson: Mr. Herman Adams

Rapporteur: Mr. Mohamed F. Rasheed

Members of Group: Ms. Doreen Holder; Mr. Neville Chin
Mr. Chandradat Baichoo; Mr. Harold Ramdin
Mr. Lewis Amsterdam; Mr. Rowland Fletcher
Mr. Bhojnarayan Totaram; Mr. Dennis Canterbury
Mr. Pieter Brandjes; Mr. J.G. Newton
Mr. Chatterpaul Ramcharran

A. PRINCIPAL PROBLEMS AND THEIR CAUSES WHICH IMPACT NEGATIVELY ON THE PRODUCTION AND MARKETING OF NON-TRADITIONAL CROPS

1. Farmers do not have access to the planting material necessary for high yields of quality produce. The causes vary with the crop but are generally a result of one or more of the following causes:
 - a) poor quality germplasm (especially of fruits) due to: non-availability or deteriorated collections; varieties and characteristics of germplasm unknown; characteristics not homogeneous, non-resistance to pests and diseases and poor nursery management;
 - b) inability of Government nurseries to meet the farmers demands for planting material of fruit crops in amounts, quality and characteristics;
 - c) nursery propagators are poorly trained;
 - d) tendency of farmers to use seedlings which do not have homogeneous characteristics;
 - e) good quality legume and vegetable seeds not available in the required amounts.

2. Farmers do not use the cultural practices required to obtain high yields of good quality products. This is due to:
 - a) farmers not having access to technical information on crops and appropriate cultural practices (crop management; inter-cropping; control of pests, weeds and diseases; use of fertilizers and other chemicals; methods of harvest and handling);
 - b) low efficiency of the Research-Development-Extension-Information System;
 - c) too few technical personnel in the system as a result of low salaries paid;
 - d) agricultural inputs (chemicals, spare parts, tools, equipment, etc) not being readily available in production areas;
 - e) difficulty in obtaining reliable information on soil fertility and fertilizer requirements;
 - f) inaccessibility to agriculture credit;
 - g) low level of mechanization and dependency on manual labour;
 - h) high risks of crop losses from praedial larceny, floods and drought, and
 - i) reluctance to make capital investment due to uncertain land tenure.

3. Farmers and intermediaries are not using the appropriate practices necessary to maintain their produce in the best possible conditions between farm and market. This is due to the following causes:
 - a) there is no planning or monitoring of crop production; this leads to gluts and scarcities and uncertain prices to sellers;
 - b) for the farmer in the hinterland the market and prices are very uncertain; as a result they attempt to minimize risk by not investing in product improvement, e.g. washing, improved packaging materials;
 - c) transportation from many production areas to consumption areas is uncertain, time consuming and offers high risk for product damage, and
 - d) many persons on boats, trucks and during short-term storage, mishandle or mistreat the products; these persons are outside the control of the farmer or intermediary owner of the crop.

Note: Details of problems by commodity group with recommendations is presented in Annex 1 to this Work Group.

B.

POLICY OBJECTIVES AND REQUIRED ACTIONS

POLICY OBJECTIVES

**REQUIRED ACTION TO ACHIEVE
SUGGESTED POLICY OBJECTIVE**

Institutional:

1. Strengthen the capacity of the sector's institutions to provide selected and priority services to producers of selected commodities with market potential.

1.1 Selection of priority crops with market potential.

1.2 Definition of the role to be played and priority services to be provided by each participating institution.

1.3 Preparation of project documents and acquisition of funds for institution building.

Technological:

2. To improve systems for the production and distribution of planting material for selected crops with market opportunities; to meet the needs of farmers in specific growing areas.

2.1 Preparation of projects to produce and distribute planting material with clear lines of responsibility.

3. To generate and transfer the appropriate technologies to meet the needs of the targeted crop farmers.

3.1 Identification of priority subjects for research.

3.2 All relevant public and private agencies will be given clear guidelines as to their respective areas of focus.

3.3 Tech-packs developed.

3.4 Effective mechanisms for training farmers in appropriate practices to be put in place.

Processing & Marketing:

4. To develop production programmes specifically for given markets: fresh or processed.

4.1 Analysis of market opportunities and crop competitiveness for specific crops.

- 4.2 Formulation and evaluation of production and marketing programmes for specific crops.
- 4.3 Formulation and evaluation of agro-processing projects.
- 4.4 Training producers, processors and traders.
- 4.5 Establish guidelines to accelerate development of processing and packaging facilities.

C. PRIORITY ACTIONS AND PROJECTS

ACTIONS

<u>Name of Action</u>	<u>Objective</u>	<u>Implementor</u>
1. Selector of priority crops with market opportunities	Identify crops with comparative and competitive advantages	GMC, MOA, IICA
2. Specialization of public sector services	Determine the required services to improve crop production and marketing; and the comparative advantages of the diverse participants	MOA, GMC, NARI, CARDI, IICA, FAO
3. A study of the manicole palm	To contribute to sustainable harvest and prevent degradation of the environment	UG, IICA, NARI, CARDI, MOA, IAST
4. A study of coconut and oil palm pests-disease, e.g cedros wilt	To sustain and increase production of edible oil	UG, IICA, NARI, CARDI, MOA, IAST, UWI
5. More effective research	To identify priority areas for research and delegate responsibilities	MOA, NARI, GMC, CARDI, IICA

PROJECT IDEAS

<u>Name of Action</u>	<u>Objective</u>	<u>Implementor</u>
1. Improvement of basic institutional services	Provide effective services to farmers in areas where MOA has a comparative Advantage	MOA, NARI, CARDI
2. Production and Marketing of pineapple	To increase the production and export of quality pineapple by: <ul style="list-style-type: none">- identification of market opportunities;- improving cultivars;- production and distribution of high quality planting material;- providing tech-pack;- effective transfer of technology;- improved post-harvest handling.	MOA, GMC, CARDI, IICA, NARI, Farmers, Processors
3. Production and marketing of other priority crops	To increase the production and export of other priority crops: <ul style="list-style-type: none">- identification of market opportunities;- improving cultivars;- production and distribution of high quality planting material;- providing tech-pack;- effective transfer of technology;- improved post-harvest handling.	MOA, GMC, NARI, CARDI, IICA, FAO, IAST, Farmers, Processors
4. Agro-processing of fruits	To stimulate private capital to establish farms and factories for large scale commercial production. <ul style="list-style-type: none">- identification of market opportunities;- identification of appropriate technologies.	MOA, IAST, GMC, GAIBANK, Private entrepreneurs.

**RESULTS OF WORKGROUP DISCUSSION ON THE
LIVESTOCK SUB-SECTOR (CATTLE AND SMALL RUMINANTS)**

Chairperson: Dr. Steve Surujbally

Rapporteur: Dr. Lennox Applewhaite

Members of Group: Dr. Lennox Applewhaite; Mr. Jules Chabral
Mr. Walter Lachman; Mr. Victor Vinas
Ms. Debra Marks; Mr. Ray Imhoff
Mr. Suresh Mohabir; Dr. Pooran Persaud
Dr. Mushtaq Amhed; Mr. Fitzroy Marcus
Mr. Cromwell Crawford

A: PRINCIPAL PROBLEMS IDENTIFIED WHICH IMPACT NEGATIVELY ON THE PRODUCTION AND MARKETING OF CATTLE AND SMALL RUMINANTS

1. Unavailability of adequate and utilizable land for the landless livestock owners.
2. Disorganized and inefficient Marketing System as a result of:
 - a) non-availability of milk collecting stations in key cattle producing areas;
 - b) obsolete milk processing plant;
 - c) low returns to producers from sales of milk and beef.
3. Infrastructural deficiencies in the following areas:
 - a) the lack of an abattoir with up-to-date facilities and internationally acceptable sanitary conditions. Such an abattoir should be closely linked with subsidiary activities including by-product utilization plants, e.g. tannery, blood, bone meal and offal utilization plants which presently do not exist;
 - b) poor access roads to some producing areas, and
 - c) unstable, inadequate, and in some cases the complete lack of electricity.

4. **Inadequate Support Services (including Extension Activities, Veterinary Services, Artificial Insemination, Laboratory Facilities, Research, Data base, etc.) specifically:**
 - a) **unavailability of animal services equipment, e.g. spray cans, veterinary equipment;**
 - b) **unavailability of important Pharmaceuticals;**
 - c) **unavailability of laboratory service equipment;**
 - d) **inadequate numbers of competent technical support staff/personnel;**
 - e) **inadequate remuneration packages for technicians, resulting in low motivation, morale and productivity;**
 - f) **unavailable/inaccessible and/or poor dissemination of information; little information is compiled on the productive performance of farms and individual animals, and**
 - g) **insufficient research undertakings and the lack of the required level of collaboration between Institutions involved in research.**
5. **Unavailability of production oriented equipment, e.g., mini-matic milking machines, churns, grass cutters/choppers, solar panels, specialized fencing materials.**
6. **Animal nutritional deficiencies caused by the inadequate availability of minerals, supplementary feeds, vitamins etc.**
7. **Low producing breeds.**
8. **Low level of cohesiveness of cattle farmers and non existence or very weak associations of cattle farmers.**
9. **Praedial larceny which acts as disincentive to farmers.**
10. **Unavailability of easily accessible credit/loans/insurance.**
11. **Decreasing cattle population as a result of the low profitability of cattle farming.**
12. **The importation of relatively cheap mutton has created a marketing problem for local producers.**

B.

POLICY OBJECTIVES AND REQUIRED ACTIONS

POLICY OBJECTIVES

1. To increase production and productivity within the sustainable and economically viable cattle and sheep industry.

REQUIRED ACTION TO ACHIEVE SUGGESTED POLICY OBJECTIVES

- 1.1 Assist farmers determine optimum size of sustainable production units.
- 1.2 Facilitate access of landless livestock owners to adequate land for livestock rearing.
- 1.3 Promote the development of basic support infrastructure (roads, electricity, dams, bridges) in areas of concentrated livestock production.
- 1.4 Improve the quality and quantum of basic support services to targeted live stock producers through:
 - improved availability to quality genetic material;
 - improved access to animal feeds and nutrients;
 - improved marketing facilities;
 - improved access to credit;
 - improved controls/enforcement of praedial larceny, and
 - improved animal health services.
- 1.5 Development of market opportunities:
 - identification of markets for various livestock products;
 - improvement of quality and quantity of animal products;
 - production of a wider variety of products, fresh and processed;
 - establishing milk collection centers;
 - modernizing and expanding the milk processing plant;
 - establish a suitable abattoir of international standard to facilitate the export of meat products;
 - offering more attractive prices for beef, milk and other related products.

- 1.6 Controls on the importation of animal products.
- 1.7 Reduction of duties levied on commodities /raw materials imported to support the local livestock industry.
- 1.8 Organize and strengthen livestock farmers associations.
- 1.9 Development of pertinent and functional animal health programmes in each of the regions.
- 1.10 Disease monitoring, prevention and control Institute program for:
 - T.B eradication;
 - Brucella surveillance;
 - Parasite control;
 - Rabies control;
 - FMD surveillance.
- 1.11 Rehabilitation of the Veterinary Diagnostic Laboratory:
 - formulation of Project;
 - financing and implementation.

C.

PRIORITY PROJECTS

<u>Name</u>	<u>Objective</u>	<u>Implementor</u>
1. Milk Marketing Mechanism	To develop an effective system for collection and processing of milk from small producers	Private entrepreneurs, Government, Support Institutions
2. Programme for disease prevention, monitoring, control and eradication	To ensure that healthy uncontaminated products (meat & milk) from the livestock industry reach the local consumer and overseas markets.	Government, Support Agencies, e.g. IICA, PAHO
3. Rehabilitation of MOA Laboratory	To provide minimum required services to meet international standards for meat exports.	MOA Donors
4. Improving extension services for livestock producers	To ensure that livestock farmers have access to basic required services.	MOA, NDDP, CARDI, IICA, Donors
5. Construction of new abattoirs	Provide meat processing facility operating at international standards.	Entrepreneur Government

**RESULTS OF WORKGROUP DISCUSSION ON THE
LIVESTOCK SUB-SECTOR (MONOGASTRICS - SWINE AND POULTRY)**

Chairperson: Errol Luke

Rapporteur: Charles Carmichael

Members of Group: Ms. Patricia Headley;
Mr. Errol Luke;
Mr. J. Chabral
Mr Charles Carmichael

**A: PRINCIPAL PROBLEMS IDENTIFIED WHICH IMPACT NEGATIVELY ON
THE PRODUCTION AND MARKETING OF SWINE AND POULTRY**

1. Inadequate extension service (particularly for swine).
2. Praedial larceny of poultry.
3. Poor quality of genetic material due to:
 - a) no national breeding programme, and
 - b) importation of poor quality chicks;
4. High cost of raw material for feed:
 - a) limited supply of local raw material, e.g. rice bran, wheat middling, copra meal, etc.
 - b) no significant national production of sorghum or corn.
5. Inadequate facilities for processing and marketing of pork.
6. Low farm gate prices for pork do not motivate production.
7. Large quantities of cheap imported chicken, eggs and pickled pork.
8. The lack of import concessions results in the high cost of vehicles required by poultry farmers.
9. High rates of disease and parasites.
10. Difficult access to credit by new farmers.

B.

POLICY OBJECTIVES AND REQUIRED ACTIONS

POLICY OBJECTIVES

**REQUIRED ACTION TO ACHIEVE
SUGGESTED POLICY OBJECTIVES**

- | | |
|--|--|
| 1. To improve production and stimulate growth within the swine and poultry sub-groups with the aim of making the country self-sufficient in the production of pork, poultry meat and eggs. | 1.1 Quantify the demands for feed by the poultry and swine industry. |
| | 1.2 Increase the supply of locally produced feed and raw materials. <ul style="list-style-type: none">- rice bran;- copra meal;- wheat middlings;- sorghum, corn, cassava, etc. |
| | 1.3 The development of a national breeding program for monogastrics. |
| | 1.4 The establishment of the necessary administrative and institutional structures to coordinate productive activities. |
| | 1.5 Instigate stricter legal action to combat praedial larceny. |
| | 1.6 The imposition of quotas and higher duties on imported poultry meat and table eggs. |
| 2. To develop and realize the export potentials of the swine industry. | 2.1 Market research to determine the domestic and regional demand for fresh and processed pork. |
| | 2.2 The establishment of a central processing plant where producers can bring their animals to be slaughtered, inspected, dissected etc. |

PRIORITY ACTIONS AND PROJECTS

PRIORITY ACTIONS

<u>Name</u>	<u>Objective</u>	<u>Implementor</u>
1. Increase import duties on chicken and eggs.	To stimulate the local poultry industry	Government
2. Formation of poultry and swine advisory committees, and farmers' association	To improve communication and coordination and design for effective solution.	Entrepreneurs, MOA, NDDP, IICA, CARDI
3. Analysis of the capabilities for increasing the production of cereal	To determine the economic feasibility and cost benefits of such an undertaking.	MOA, CARDI, NARI
4. Feasibility study of regional market for pork products.	To determine the competitive advantage of Guyana for producing pork.	IICA CARICOM

PRIORITY PROJECTS

<u>Name</u>	<u>Objective</u>	<u>Implementor</u>
1. The establishment of the necessary administrative and institutional structures to coordinate and direct the activities of swine and poultry production in Guyana.	To mobilize the appropriate technical staff. To organize farmers' training and education programs to organize model farms and exhibitions, aimed at exposing farmers to more efficient methods of production.	MOA, NARI, CARDI, FARMERS

**RESULTS OF WORKGROUP DISCUSSION ON
THE FISHERIES SUBSECTOR**

Chairperson:	Reuben Charles	Rapporteur:	Trevor Nero
Members of Group:	Terrence Phillips; Prabhu Sookraj; Shiek Yussuff; C.C. Osigwe; Cyril Solomon;	D. Sohail John Clowes Ganga Persaud Vincent Atkins Walter Joseph Willis	

A: PRINCIPAL PROBLEMS IDENTIFIED WHICH IMPACT NEGATIVELY ON THE FISHERIES SUBSECTOR

1. There is a paucity of information and databases for decision making on the fisheries subsector.
2. The Fisheries Department is very weak institutionally, in terms of physical, financial and human resources.
3. The marine fisheries management plan has not been finalized.
4. Fisheries legislation is out of date.
5. The inadequacy of surveillance and enforcement contributes to low levels of income and over exploitation of fisheries resources.
6. There is no established policy on foreign fishing.
7. Aquaculture is in its incipient stage and has not developed significantly due to limited resources of all types.
8. Small scale processors and aquaculture farmers are constrained by limited access to land and credit.
9. Fisheries processing plants are under utilized and inefficient.
10. The technologies utilized for harvesting and post harvest handling of fish and sea foods are generally below standards. This contributes to product quality often being below minimum standards.
11. The marketing skills of fishermen and processors are not well developed.
12. The risk of destruction to the coastal zones is increasing and management capability and know-how is insufficient to deal with the magnitude of the problem.

B.

POLICY OBJECTIVES AND REQUIRED ACTIONS

POLICY OBJECTIVES

**REQUIRED ACTIONS TO ACHIEVE
REQUIRED POLICY OBJECTIVES**

1. To achieve sustainable development of fishery resources
 - 1.1 Establishment of an information system for marine and inland fishing to facilitate decision making.
 - 1.2 Finalization, for implementation, of the draft fisheries legislation.
 - 1.3 Institutional strengthening of the Fisheries Department.
 - 1.4 The development of the capacity for effective surveillance and enforcement.
 - 1.5 The development of policy on foreign fishing.
 - 1.6 Finalization for implementation of the Fisheries Management Plan.
 - 1.7 Promotion of Coastal Zone Management.

2. To increase and diversify fish production while improving product quality.
 - 2.1 The development and implementation of an aquaculture program.
 - 2.2 The acquisition of harvesting technology for deep slope and pelagic species.
 - 2.3 Making land and credit facilities more readily available to aquaculture farmers and small scale processors.
 - 2.4 Promoting the efficient utilization of existing processing plants.
 - 2.5 Developing & implementing a national quality assurance program based on HACCP principles.

C.

PRIORITY PROJECTS

<u>Name</u>	<u>Objective</u>	<u>Implementor</u>
1. Strengthening of Fisheries Department	To enable the Fisheries Department to effectively carry out its mandate	Min. of Agriculture
2. Development of Surveillance and enforcement capacity	To monitor and enforce Fisheries Regulations and Laws	Coast Guard
3. Aquacultural Development	To promote aquaculture on marginal lands with the purpose of increasing fish production.	Min. of Agriculture
4. Quality Assurance Program	To improve product quality so as to meet international standards. This will help to maintain and increase markets and improve earnings to the industry.	Guyana National Bureau of Standards Department of Fisheries/GAHEF
5. Upgrading Cottage Industries	To increase Fish production and quality. To increase income of processors and improve their standard of living. To increase the range of fish products and improve technology. To improve marketing skills.	Min. of Agriculture in collaboration with CHPA/GAIBANK/ GAHEF

Executive Summary

Situation Paper on the Fisheries Sub-sector of Guyana

Area	Problem	Objective	Action	Implementor
Fisheries Management and Development Plan.	The lack of an approved Fisheries Management and Development Plan for the Fisheries Sub-sector of Guyana.	Put in place a Fisheries Management and Development Plan for the Fisheries Sub-sector of Guyana.	To develop and have approved for implementation a Fisheries Management and Development Plan for the Fisheries Sub-sector of Guyana.	Ministry of Agriculture, Fisheries Department and CIDA.
Fisheries Legislation.	Fisheries management and development still being guided by Fisheries Act 1957 and Maritime Boundaries Act 1977 as draft Act done in 1985 still to be approved by Parliament.	Legislate up-to-date legal framework for fisheries management and development.	To have the FAO review and up date 1985 draft fisheries legislation.	Ministry of Agriculture, Fisheries Department, Attorney General's Chambers and FAO.
Marine Fisheries Management Plan.	Ad hoc approach to management of the Marine Fishery.	Implement the Marine Fisheries Management Plan.	To take the first draft of the Marine Fisheries Management Plan through the fishery management planning process and have it approved for implementation.	Ministry of Agriculture, Fisheries Department and CFRAMP.
Data Collection System.	Lack of data in the Marine Fishery for fisheries management and development planning.	Implement the Fisheries Data Collection System for the Marine Fishery.	To finalise and implement the Fisheries Data Collection System with assistance from CFRAMP.	Ministry of Agriculture, Fisheries Department And CFRAMP.
Coastal and Marine Environment.	Degradation of mangrove and other wetlands which serve as nursery grounds for some species of marine fish.	Coordinate the approach to coastal zone management and development.	To strengthen the inter-agency approach to coastal zone management.	GAHEF and Ministry of Agriculture.
Surveillance and Enforcement.	Inability of the agencies concerned (Coast Guard, Guyana Police Force and Fisheries Department) to carry out surveillance and enforcement in Guyana's Fishery Zone.	Enhance the capacity of the Coast Guard to carry out surveillance and enforcement in the FZ.	To provide the Coast Guard with the necessary resources (skills, vessels, funds) to conduct surveillance in the FZ.	Coast Guard, GOG and donor agencies.

<p>Processing and Marketing: Cottage Industry for dried, salted and smoked fish and shrimp.</p>	<p>Limited land space for expansion; lack of knowledge of the techniques for processing and preserving fish and shrimp; and limited knowledge of quality control techniques and marketing.</p>	<p>Identify land for development; and provide training in processing and preservation of fish and shrimp and in the areas of quality control and marketing.</p>	<p>To develop and implement a development and technical assistance project for the Cottage Industry.</p>	<p>Ministry of Agriculture, Fisheries Department, CHPA, CBH, GNBS, GAHEF, IPED and GAI BANK.</p>
<p>Quality Assurance.</p>	<p>Lack of a comprehensive approach to quality assurance in the Fisheries Sub-sector.</p>	<p>Put in place mechanisms to ensure a comprehensive approach to quality assurance (in order to meet stringent importing country requirements and to improve on the quality of fish on the local market) in the Fisheries Sub-Sector.</p>	<p>To develop and implement a programme for the establishment of a national quality assurance system for the production of fish and fish products.</p>	<p>Ministry of Agriculture, Fisheries Department, GNBS, GAHEF and possibly FAO and/or UNIDO.</p>
<p>Public Sector Investment: Artisanal Fisheries Infrastructure Complexes.</p>	<p>Lack of management and other skills and start-up capital.</p>	<p>Ensure sustained profitability of the complexes as they seek to achieve the Project objectives of increasing the supply of fish for the local market and export; increasing the productivity and incomes of artisanal fishermen; moving the existing fishermen's cooperatives towards the role of local organisations of producers and marketers.</p>	<p>To strengthen the Committees of Management by appointing individuals with skills in commerce, management, etc. To encourage mergers of some societies. To promote cooperative/ private sector joint ventures.</p>	<p>Ministry of Agriculture, Fishermen's Cooperatives and local/foreign entrepreneurs.</p>
<p>Inland Fishery</p>	<p>Lack of data for fisheries management and development.</p>	<p>Generate data for fisheries management and development.</p>	<p>To design and implement a data collection system.</p>	<p>Ministry of Agriculture, Fisheries Department.</p>
<p>Aquaculture</p>	<p>Lack of skills, technology, infrastructure, equipment and funds for aquaculture research and development.</p>	<p>Promote aquaculture development.</p>	<p>To encourage aquaculture development by way of local/foreign joint ventures (utilising a highly marketable species such as prawns) to facilitate technology transfer. To conduct a feasibility study on prawn culture in Guyana. To develop a five to ten year aquaculture development plan.</p>	<p>Ministry of Agriculture, Fisheries Department, FAO, local and foreign entrepreneurs.</p>

<p>Institutional Support (Fisheries Department).</p>	<p>Failure to effectively fulfill its mandate to manage, regulate and promote the exploitation and development of the Nation's fishery resources due to lack of technical and support staff, equipment, suitable building and funds.</p>	<p>Develop the capability of the Fisheries Department so that it could effectively carry out its mandate.</p>	<p>To development and implement a programme for the institutional strengthening of the Fisheries Department.</p>	<p>Ministry of Agriculture, Fisheries Department and possibly CIDA and/or UNDP.</p>
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**RESULTS OF WORKGROUP DISCUSSION ON
MARKETING**

Chairperson: R. Rodrigues

Rapporteur: Nigel Durrant

Members of Group:

Alton Daw;	Hetty London
Basil Phillips;	Ismay Sam
Pat Sheerattan;	J. Williams
Patrick Carryl;	B.P Giri
Jerry LaGra;	K.A.T.S. Perera
Joan Swamy;	Gaychandra Singh

A: PRINCIPAL PROBLEMS IDENTIFIED WHICH IMPACT NEGATIVELY ON THE PRODUCTION AND MARKETING OF NON-TRADITIONAL CROPS

1. Transportation constraints are due to:

- a) inadequate facilities by water, land and air;
- b) difficulties with on-line arrangements for cargo transhipped through Trinidad and Barbados by air;
- c) high cost of transporting agri-produce to Georgetown by river and road;
- d) difficult delivery of non-traditional crops in Riverain areas due to poor transportation links and low farmgate prices;
- e) deficient facilities of vessels carrying produce to Regional markets (loading/off loading, on ship storage), and
- f) poor conditions of Government-owned/operated ferry boats.

2. Storage and handling problems are due to:

- a) inadequate storage at farm, transfer points, shipping points and population centres;
- b) inadequate packaging materials;
- c) rural marketing centres failure to provide the services for which they were established;
- d) inadequate pack houses for preparing produce for export;
- e) poor handling of produce from the hinterlands as it moves through the marketing system, and
- f) poor condition of public markets.

3. Marketing and communication constraints can be summarized as:

- a) weak agricultural marketing services (technical assistance, information, credit, laboratory analysis) provided by the public sector;
- b) poor communication links between producing areas and population centres;
- c) weak or non-existent associations of producers of non-traditional crops;
- d) insufficient market intelligence and information for effective decision making on International and Regional markets, and
- e) the uncertainty of telephone and facsimile connections can delay international communication.

4. Characteristics of production and produce which contribute to the problem:

- a) large number of highly perishable crops of variable quality are geographically dispersed and produced in small quantities;
- b) periodic gluts of seasonal produce with few market opportunities;
- c) high spoilage of produce due to such things as high costs of transportation, limited demand and very few agro-processing installations, and
- d) scarcity of high quality produce on a regular basis.

5. Institutional factors which contribute to the problem:

- a) centralization in Georgetown of all export documentation, which hinders direct shipments to Trinidad from Charity or Kumaka;
- b) the 30% consumption tax on processed agriculture products discourages agro-processors, and
- c) the absence of a surveillance service to monitor standards for exported produce.

B.**POLICY OBJECTIVES AND REQUIRED ACTIONS****POLICY OBJECTIVES****REQUIRED ACTION TO ACHIEVE
SUGGESTED POLICY OBJECTIVES**

1. Transportation: improve physical flow of produce from producing to marketing areas.
 - 1.1 **Water:** THD to put in regular/ additional service for North West and Essequibo
 - 1.2 **Roads:** rehabilitation of access roads to priority areas
 - 1.3 **Export:** Government to renegotiate access to Canada by air
 - 1.4 New GMC/ANTEG to lobby airlines for link with Barbados.
2. Rehabilitation & expansion of marketing infrastructure.
 - 2.1 Develop wholesaling facilities - including chilled storage (Government/Private Sector)
 - 2.2 Develop project and seek funding for rehabilitation of markets.
3. Improve the communication and information systems to meet the needs of the sub-sector.
 - 3.1 Encourage media to publicise market information.
 - 3.2 Improve data collection activities, e.g. wholesale and farm gate prices and information from external markets.
4. Improve technology base for the production and marketing of non-traditional crops.
 - 4.1 Develop computer database programs for:
 - tree crops
 - root crops
 - vegetables(including production, post harvest, use of pesticides, training, planting materials, processing).
5. To improve the accessibility of producers and traders to marketing credit.
 - 5.1 Central Bank to initiate pre and post shipment credit to exporters
 - 5.2 Government and commercial banks to explore alternative means of financing small farmers, traders and processors.

C.

PRIORITY ACTIONS AND PROJECTS

PRIORITY ACTIONS

<u>Name</u>	<u>Objective</u>	<u>Implementor</u>
1. Feasibility study for the modification of the six Rural Marketing Centres	Determine how best to utilize these multi-million dollar investments to facilitate the marketing of non-traditional crops.	IDB GMC
2. Negotiations with shipping companies	To improve linkages with markets and obtain preferential shipping rates	Government
3. Government must clearly state its policies for the development of the non-traditional food sub-sector	Inform the public of plans, objectives, and services to be provided	MOA
4. Comprehensive study of the non-traditional produce sub-sector	To determine priority needs for storage, processing and shipping infrastructure	Consultants, GMC, FAO, IRC
5. Identification of export market opportunities	To identify market niches for selected products in regional, North American and European markets.	Consultants, IICA, Canada, USDA
6. Study of the agro-processing sub-sector	To identify the present situation, priority constraints and the potential for development.	FAO, Consultants, Private Sector
7. Feasibility study of transportation systems for non-traditional produce	To determine economic feasibility of private sector and/or joint ventures to provide transportation from riverain areas to Georgetown.	FAO, Consultants, GMC
8. Training in post harvest handling of perishable commodities	Provide farmers and traders with basic knowledge for appropriate postharvest handling	IICA, CARDI, FAO, GMC, MOA
9. Study of feasibility for reduction of 30% consumption tax on processed agricultural products.	To encourage the development of the agro-processing sub-sector	Min. of Finance MOA, GMC

PRIORITY PROJECTS

<u>Name</u>	<u>Objective</u>	<u>Implementor</u>
1. Construction of an air freight cargo handling facility at Timehri	To provide exporters with necessary facilities to maintain quality produce for export and facilitate necessary paper work	Private sector, Laparkan, Airport authorities
2. Development of the agro-processing capabilities	To stimulate processing of non-traditional crops for the domestic and export markets	Chamber of Commerce, Entrepreneurs, Min. of Trade, FAO
3. Joint ventures for large scale production and marketing effort	To develop a model for large-scale competitive production of selected products for export markets	MOA, GMC, CARICOM, Entrepreneurs
4. Rehabilitation and expansion of Stabroek and Bourda markets	To improve the quality of services to Georgetown consumers	Municipality, FAO
5. Development of an appropriate market information system	To generate, analyse and make available to farmers and traders up to date information of markets, marketing costs and market opportunities.	GMC, IICA
6. Improved quality control of exports	Establish and monitor appropriate crop standards for export including "quality export seal"	GMC, Min. of Trade
7. Improvement of laboratory facilities	Develop the laboratory capacity to detect and monitor insecticide residues in fresh and processed produce.	Min. of Health GMC, MOA

**RESULTS OF WORKGROUP DISCUSSION ON
INFORMATION AND GENERATION AND TRANSFER OF TECHNOLOGY**

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A. PRINCIPAL PROBLEMS IDENTIFIED WHICH IMPACT NEGATIVELY ON THE QUALITY OF INFORMATION AND TECHNICAL SERVICES REACHING THE FARMER

1. Absence of an overall agricultural development policy which stipulates the respective and complementary roles of information, research and extension services. This lack of clarity in policy is a result of many factors including:
 - a) recent change in Government;
 - b) a diversity of institutions with distinct objectives and goals;
 - c) too few personnel involved in the planning process;
 - d) a shortage of expertise in Guyana in the areas of research and effective transfer systems, and
 - e) poor communication between the Planning Department and the Extension Service Division.

2. Available information on production and marketing of diverse crops is not readily available to farmers and other users of such information. This situation is caused by the following:
 - a) under-utilization of the information dissemination media available in Guyana;
 - b) libraries and information centres which are poorly organized, stocked and staffed (with some exceptions);
 - c) shortage of well trained and computer literate information specialists and librarians;

- d) low levels of prestige and salaries for librarians;
 - e) deterioration of electronic equipment for lack of appropriate physical environment;
 - f) low levels of finance for the purchase of technical material and construction of proper facilities;
 - g) important documents are often not deposited in information centres but remain in private collections;
 - h) persons working with farmers do not effectively access and utilize all the available information the farmers need, and
 - i) the form in which the information is found may not be suitable for effective transfer to farmers.
3. The system for the generation and transfer of technologies does not respond to the real needs of the farmers of Guyana. The reasons for this situation are many, of which the more important causes are the following:
- a) the real needs of the farmers, which would allow them to increase their net incomes, have not been clearly defined and related to market opportunities;
 - b) links between farmers and extension officers are generally weak or non-existent;
 - c) communication between towns and the hinterland are often difficult or non-existent;
 - d) extension officers have little economic incentive to work with farmers on their lands;
 - e) extension officers have not had the opportunity to upgrade their technical skills;
 - f) communication and coordination with regional and international support organizations is often weak or non-existent;
 - g) research often takes several years and may never result in anything of economic benefit for the farmer;
 - h) technologies are often recommended without the proper validation;
 - i) extension officers do not have access to support units which could provide visual aids, publications and other training tools;
 - j) the orientation and priorities of the extension service and research institutions do not correlate well with the economic goals of the farmers and market opportunities;
 - k) there is no effective means for monitoring and evaluating neither the extension officer nor the effectiveness of the overall programme;

B.**POLICY OBJECTIVES AND REQUIRED ACTIONS****POLICY OBJECTIVES**

1. To institute a National Agriculture Policy which integrates information, research and extension into an effective and complementary system.

2. To improve the flow of and access to technical information.

3. To develop and place in operation an effective extension service which responds to the needs of Guyanese farmers.

4. To reorient agriculture research so that it responds to priority needs of commodity systems.

REQUIRED ACTIONS TO ACHIEVE SUGGESTED POLICY OBJECTIVES

- 1.1 Reach a consensus of opinion among diverse participants as to the appropriate strategies and mechanisms.
- 1.2 Formulate a policy
- 1.3 Legislate the policy

- 2.1 Train extension personnel on available types, form and sources of technical information.
- 2.2 Strengthen NARI Library and Information Centre as the focal point of the National Agricultural Information Network.
- 2.3 Upgrade NARI's Information Centre so that it can provide improved services in: training in information systems; operation of computer systems; desktop publishing and others required by extension personnel.

- 3.1 Identification of the real felt needs of Guyanese farmers, prioritizing particular crops with market opportunities.
- 3.2 Provide the necessary incentives to extension workers to ensure that effective transfer takes place.

- 4.1 Systematic research of priority commodity systems to determine priority constraints and needs for research.
- 4.2 Closer integration of NARI, MOA, CARDI and GMC in planning and operational activities.

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|----|---|-----|---|
| 5. | To develop an effective mechanism for the monitoring and evaluation of the Extension Service through the MOA Planning Department. | 5.1 | Strengthen the human resources of the MOA Planning Department. |
| | | 5.2 | Establish linkages between the Planning Department and the Extension Service Division |
| | | 5.3 | Develop and validate an effective monitoring system. |

C. PRIORITY ACTIONS AND PROJECTS

ACTIONS

<u>Name</u>	<u>Objective</u>	<u>Implementor</u>
1. Workshop on information research and extension	Define a strategy for integrating the services of NARI, UG, MOA and CARDI	MOA
2. Form inter-institutional team of specialists in information, research and extension	Formulate a plan of work for integrating the three services	MOA, NARI, UG CARDI
3. Strengthen the Planning Department of MOA	Formulate and execute a one year plan of activities to strengthen the Planning Department of MOA and forge linkages with the Extension Division	MOA, IICA, IDB, CARIDAD
4. Workshop for extension personnel on types, forms and sources of information	Improve the abilities of extension personnel to access and utilize information	NARI
5. Revision of legal deposit law	To make it mandatory that all agricultural and allied institutions deposit 3 copies of relevant documents with NARI.	Parliament, NARI

6. Connection of telephone services at NARI	To facilitate use of Library and Information Centre	G T & T
7. Training of Librarians and Information Specialists at UG	To supply the human resources required for the development of an effective agricultural Information Service	UG
8. Prioritization of crops with market opportunities	Determine crops for which Guyanese farmers have comparative advantages	GMC, MOA, IICA
9. Execution of commodity studies using an inter-disciplinary systems approach	To describe systems and identify priority constraints at major points within system.	GMC, MOA, IICA, CARDI

PROJECTS

<u>Name</u>	<u>Objective</u>	<u>Implementor</u>
1. Establishment and operation of National Agricultural Information Network	Establish a system which provides agricultural information to meet the needs of technicians, farmers and others	NARI
2. Facilitating farmers access to production and marketing services	Ensure that farmers receive opportunely the necessary extension services for efficient production and marketing. Services from the MOA would be specialised in those areas where the Public Sector has comparative advantages; other services would be provided by the Private Sector.	MOA, CARDI, IICA
3. Strengthening of MOA Planning Department	Create the institutional capability for monitoring and evaluating MOA programmes and projects, including the Extension Service.	MOA, IICA CARIDAD. IDB

**RESULTS OF WORKGROUP DISCUSSION ON
RURAL DEVELOPMENT AND RURAL FINANCING**

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**A: PRINCIPAL PROBLEMS IDENTIFIED AND THEIR CAUSES WHICH IMPACT
NEGATIVELY ON RURAL DEVELOPMENT AND RURAL FINANCING**

1. Absence of a well defined policy for rural development due to:
 - a) weak organization and leadership in rural communities;
 - b) lack of community cohesiveness;
 - c) poor coordination among development agencies;
 - d) uncertainty as to institutional responsibility for rural development, and
 - e) unclear policies regarding land ownership.

2. Poor or non-existent support services (credit, extension, marketing, health, education, legal aid, others) as a result of:
 - a) weak institutional framework;
 - b) scarce human and financial resources within public sector institutions due to poor economic incentives;
 - c) poor communication between urban institutions and rural target groups;
 - d) poor information systems, and
 - e) unorganized community lobby groups.

3. Low levels of employment opportunities in rural areas due to:
 - a) scarce capital for investment;
 - b) uncertain land tenure;
 - c) poor soils;
 - d) serious pests such as accushi ants;
 - e) difficult access to farm inputs;
 - f) lack of farming and livestock tradition in Amerindian communities;
 - g) very limited planning, business management and marketing skills;
 - h) difficult access to technical assistance;
 - i) under utilization of available human and natural resources;
 - j) poor communication with markets;
 - k) high costs of transportation;
 - l) high costs of electricity.

B: POLICY OBJECTIVES AND REQUIRED ACTIONS

POLICY OBJECTIVES

REQUIRED ACTIONS TO ACHIEVE SUGGESTED POLICY OBJECTIVES

1. To formulate and execute an effective rural development policy.

1.1 Establish a National coordinating committee on rural development.

1.2 Dialogue among all Government and non-Government organizations, agencies involved in rural development and representatives of target communities.

1.3 Formulate policy, strategies and plan of action for implementation.

- 1.4 Promote actions to strengthen rural organizations.
 - 1.5 Clarify national land policies.
 - 1.6 Monitor implementation of rural development projects.
 - 2.1 Prepare inventory and case studies of human and physical resources.
 - 2.2 Evaluate on-going and completed projects to establish reasons for success and failures.
 - 2.3 Identify new projects.
 - 2.4 Effective communication of baseline information to target groups and decision makers.
2. To establish an information base on rural development in Guyana.
3. To mobilize savings to finance rural development.
 - 3.1 The establishment of rural banks, thrift and credit societies.
 - 3.2 Extend urban credit programmes to rural communities.
4. To develop area-specific production related activities.
 - 4.1 Identification of the available resources and needs of specific communities.
 - 4.2 Consultations with target groups.
 - 4.3 Training activities.
 - 4.4 Identification, design and implementation of appropriate projects.

C.

PRIORITY ACTIONS AND PROJECTS

<u>Name</u>	<u>Objective</u>	<u>Implementor</u>
1. Formation of a National Rural Development Coordinating Committee.	To ensure a well integrated national plan of action	UG, IDS, CARDI, NGO's, Amerindians, IICA.
2. Formulation of rural development policy, strategy, and plan of action.	To effectively guide the rural development process	Govt. Ministries, UG, IDS, CARDI, NARI, IICA, NGO's, Regional Development.
3. Feasibility studies in the following areas: - processing of cashew - Amerindian tourism - beekeeping - peanut production and processing - vegetable production - crafts making and marketing - furniture making - agro-forestry - others.	To identify economically viable and sustainable enterprises for rural communities	Beacon, FUTURES, SIMAP, IICA, CESO, PL-480
4. Execution of inventories of human and natural resources in Amerindian communities.	To identify potential resources for development purposes	MOA, NARI, CARDI, IICA, Regional Development.
5. Evaluation of on-going projects and case studies.	To determine causes of success and failures	UG, IDS, SIMAP, FUTURES, IICA, CARDI, NARI. NGO's.
6. Publication on rural development.	Disseminate information on rural development activities in Guyana.	NGO's, IICA, UG.

PROJECTS

<u>Name</u>	<u>Objective</u>	<u>Implementor</u>
1. Establishment of a national rural development information centre	To coordinate the systematic collection, analysis and dissemination of Information on rural development	UG, IICA, NARI, CARDI, IDS.
2. Establishment of rural financial Institutions	To provide funding for rural development projects	NGO's, Credit Unions, Commercial Banks, CDB
3. Establishment of rural vocational training centres	To improve the technical skills of rural populations	NGO's, Government Ministries, OAS, CDB

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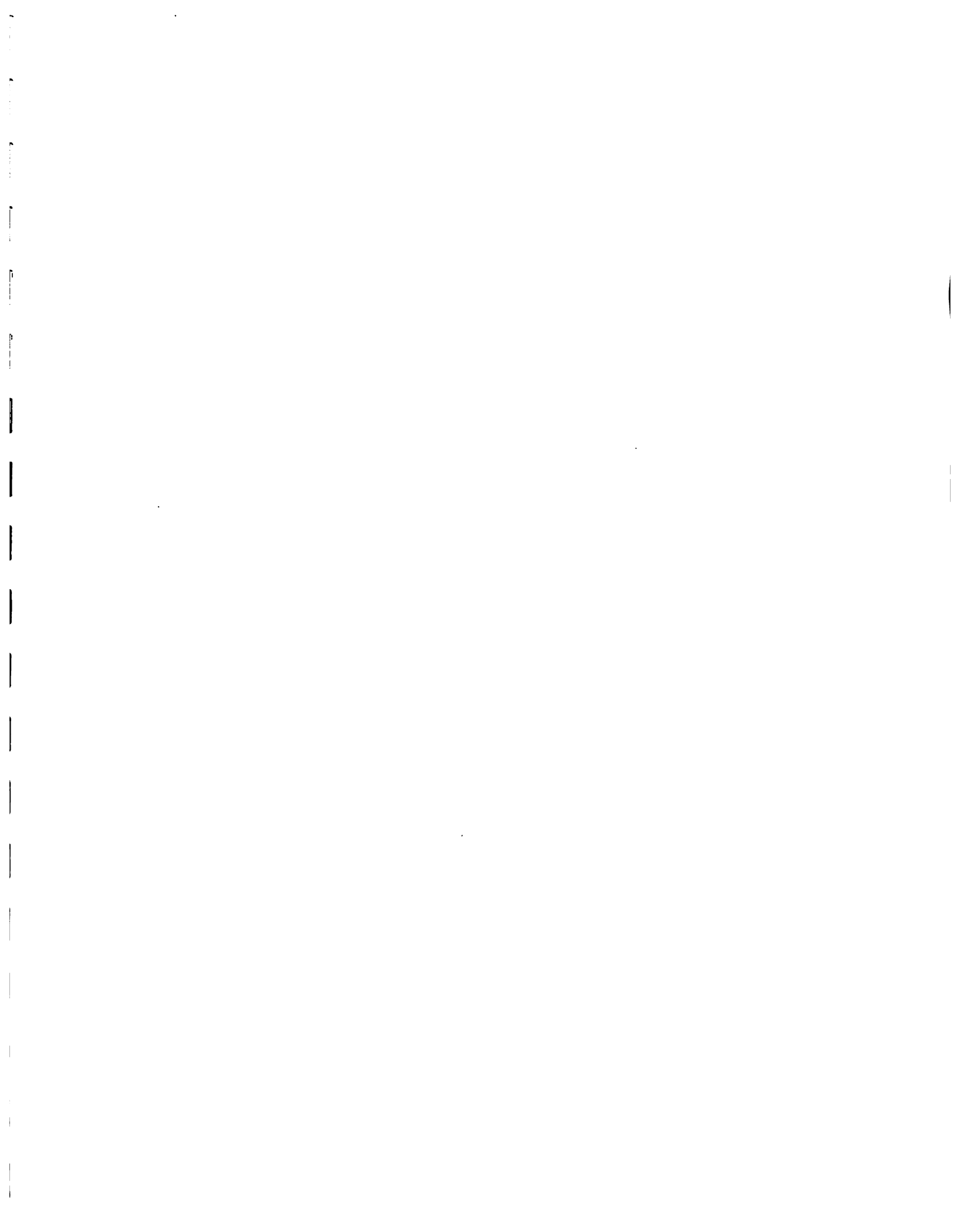
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