

GOVERNMENT OF GUYANA
MINISTRY OF AGRICULTURE

ANNUAL REPORT
1994

Ministry of Agriculture
Regent & Vlissengen Roads
Georgetown
Guyana

Acknowledgments

During 1994, the Ministry of Agriculture, in keeping with its Mission Statement, continued the thrust "To promote and Support the Development of Agriculture in Guyana".

The various departments of the Ministry, together with allied organisations including the New Guyana Marketing Corporation, National Agricultural Research Institute, National Dairy Development Programme and the Guyana School of Agriculture, all provided valuable support and services to farmers and producers of agricultural commodities.

The projects and programmes executed by the Ministry, greatly benefitted from much needed financial assistance and technical support provided through International Funding/ Organisations such as IDB, World Bank, EEC, CDB, IFAD, CIDA, UNDP, FAO CARICOM and IICA.

In all, the combination of efforts enhanced the fostering of growth and development within the agricultural sector.

Prabhu Sookraj
Permanent Secretary
MINISTRY OF AGRICULTURE

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EXECUTIVE SUMMARY

The Ministry of Agriculture, as the prime agency responsible for promoting the development of agriculture in the country, is charged with the task of providing technical and administrative support services to the sector. In so doing the Ministry collaborates with specialised agencies such as the National Agricultural Research Institute (NARI), the Guyana School of Agriculture (GSA) and the Guyana Marketing Corporation (GMC)

At the end of 1994, the Ministry comprised the following Offices and Departments:

Political Directorate

Minister of Agriculture
Minister in the Ministry of Agriculture

Administrative Directorate

Permanent Secretary
Deputy Permanent Secretary

Departments

Head Quarters
Administration Division
Personnel Division
Finance Division
Planning Division
Agricultural Project Cycle Unit
Crops and Livestock
Fisheries
Lands and Surveys
Hydraulics
Hydrometeorology

Policy Development and Project Planning

During the year, much effort was expended on the preparation of an agricultural sector policy document. The document, which covered all sub-sectors and support services, was completed in draft and entitled "Policies and Priority Actions for the Agricultural Sector". The document benefited from extensive consultations with departments, allied

agencies and the private sector and is intended to form the basis for project identification and prioritization in coming years.

The Ministry was also engaged in negotiations, policy work and other activities relating to the following proposed projects:

- World Bank non traditional crop and livestock project
- IDB Shorezone Management Programme
- IDB Agricultural Support Services Programme
- IDB Agricultural Sector Loan
- CDB drainage and irrigation (GUYSUCD pumps) project

In addition, intensive work was done in the following areas:

- Institutional and legislative reform for the rice sector
- Drainage and irrigation institutional and policy reform
- Land market development and institutional reform
- Reform of the technology services (research, extension etc.)

Departmental Reports

The **Administrative Division**, which is responsible for providing general support services to the Ministry and, in particular, to departments based at headquarters, reported on limited human, financial and human resources available to it and the consequential pressure on existing staff. The **Personnel and Finance Departments** also operated under similar constraints. While most routine activities continued to be carried out, longer range activities such as training were not processed at desired levels.

The **Agricultural Project Cycle Unit (APCU)**, which has been given the task of supporting all activities in relation to

project identification, formulation, negotiations with funding agencies and monitoring, performed exceptionally well, although it suffered from its share of lack support infrastructure. In addition to supporting the development of several projects, the Unit performed a variety of policy-related tasks in such areas as drainage and irrigation, sea defences, land administration, the rice industry, and development of farmer technology systems. The **Planning Division** continued to manage the crop reporting system for "other crops", published the annual digest of statistics, a cattle & milk production survey, and produced some special studies.

The **Crops & Livestock Department**, the largest in the Ministry, entered its second year operation of the re-centralized extension service. The service, however, continued to experience shortages and delays in the disbursement of operational funds. At least ten persons at the operational level left the service for more lucrative employment. This left supervisory staff with control over a narrow band of subordinate personnel or, in extreme instances with no lower level functionaries at all. Although few new recruits were to be had among graduates of tertiary institutions, efforts were made to provide hinterland districts such as the Rupumuni with graduate extension personnel. In addition to salaries, problems of transportation, housing, poor maintenance of infrastructure (such as nurseries) and organizational constraints (such as the slow rate of reimbursement of travel and other payments) continued to hamper the operation of the service, and resulted in a significant reduction in morale.

The animal health services continued to develop programmes for the control / eradication of bovine tuberculosis and carried out limited surveys of rabies in cattle. It plans to launch a rabies vaccination campaign and a vampire bat control campaign in Essequibo in 1995. The Department reported that the animal quarantine situation remained unsatisfactory. The **National Dairy Development Programme (NDDP)** continue its well-established programmes in pasture development and artificial insemination throughout the coast.

The **Fisheries Department** performed its regulatory and development activities with limited staff. The Department performed closing down operations for the Artisanal Fisheries Infrastructure Project (AFIP) and the related Fisheries Equipment Facility (FEF). Under the Fisheries Technical Assistance Project (FTAP) which commenced in 1994, Canadian consultants were put in place and some training of local staff commenced. The main aim of FTAP is to prepare a fisheries development plan and to formulate investment projects for the sub-sector. The CARICOM Fisheries Resource Assessment & Management Programme (CFRAMP), which is designed to enhance the data base for sustainable exploitation of fisheries resources in member countries, launched

the sub-projects in large pelagic reef fishers and deep slope fisheries. The Resource Assessment Unit for shrimp and ground fish was established in Trinidad & Tobago.

The **Hydraulics Department**, which is in charge of both drainage and irrigation, and sea defences, continued to implement the following capital projects:

1. Black Polder Rehabilitation Project
2. Drainage & Irrigation Rehabilitation Project
3. East Bank Berbice Rehabilitation Project
4. Infrastructure Rehabilitation Project
5. Sea Defence Rehabilitation Project

The programme implementation unit of the **Sea Defence Programme**, which was created to administer the foreign-funded sea defence programme is responsible for the following projects:

1. IDA Credit #2477 - East Coast Demerara
2. CDB Loan # 8/SFR-GU - West Coast Berbice
3. IDB Loan # 877/SF-GY - Corentyne & Essequibo
4. Lomé IV Grant - Essequibo & West Demerara Coasts

During the year, preparatory work, including designs and negotiations with contractors continued.

The **Hydrometeorological Department** which is responsible for providing information on the climate and water resources of Guyana, performed its routine weather forecasts as well as research on climatic trends, water and the environment, and climate change. The Department also reported on its severe inability to attract qualified staff, poor working conditions and financial constraints.

The **Lands & Surveys Department**, which is responsible for the mapping and administration of all publicly owned lands, and the granting of leases, permissions, and other title to such lands, continued its work in these areas. The future of the Department was the subject of much discussion within the context of the IDB agricultural programme being developed during the year. It is envisaged that the Department will be granted semi-autonomous status thereby allowing it to attract the required calibre of staff.

MISSION STATEMENT

TO PROMOTE AND SUPPORT

THE DEVELOPMENT OF
AGRICULTURE

IN GUYANA

Departmental & Project Reports

Administrative Division

Mission Statement

To assist the Ministry in the promotion and support of the development of Agriculture in Guyana by providing internal administrative, logistic and support services to the Ministry's Head Quarters and by supervising and coordinating the provision of such services to the other Department / Agencies of the Ministry.

Brief Description of Functions

This Division provides administrative support to the various Departments/ Divisions and to the agriculture-related agencies through the preparation of memoranda, aides memoir and reports. It also convenes meetings/ seminars/ workshops and ensures that decisions taken are properly recorded and implemented.

The Division also oversees the work of the Central Registry in order to ensure that it provides an effective and efficient system of filing, recording, speedy retrieval of data and dispatch of all correspondence.

In addition, the Division is responsible for the general upkeep

of the Ministry's compound, the proper functioning of utilities and for security.

Summary and Review of Year's Programme

Throughout the year, the Division was faced with limited human, financial and material resources. This was due to the rapid turn over of typing and filing personnel, messenger personnel and the shortage of staff in the Administrative Secretariat and limited funds to execute general house-keeping functions.

In addition, an increased volume of work, due to unplanned but important activities, put a strain on the division's limited resources.

However, several Cabinet Memoranda were prepared and submitted to Cabinet. These memoranda dealt with a wide range of matters such as, attendance at overseas conferences; meetings; the initiation of amended legislation; appointments of members to Statutory Boards and Committees; the ratification of Agreements and matters requiring policy decisions.

The Registry Staff throughout the period under review worked overtime regularly, in order to maintain the required level of document processing.

The Division was unable to maintain its level of forty-eight (48) staff members during 1994 (See staffing at 1994-12-31 below.)

The vital position of Administrative Assistant remained unfilled but the duties of this position were performed by the Principal Assistant Secretary (General), PAS (g).

Work in this Division was hampered by the following factors:

1. Inadequate and unqualified staff members
2. Rapid staff turnover
3. Inadequate salaries / wages and welfare benefits

In order to increase the Division's level of performance, urgent consideration needs to be given to:

- a. Filing all vacancies with suitably qualified personnel;
- b. Upgrading the qualifications of staff through relevant training;
- c. Timely releases of funds for the purchase of stationery, equipment, materials and spares; and
- d. Improving the physical working environment.

The details of the Division's work during 1994 are set out in Table 2.

ADMINISTRATIVE DIVISION

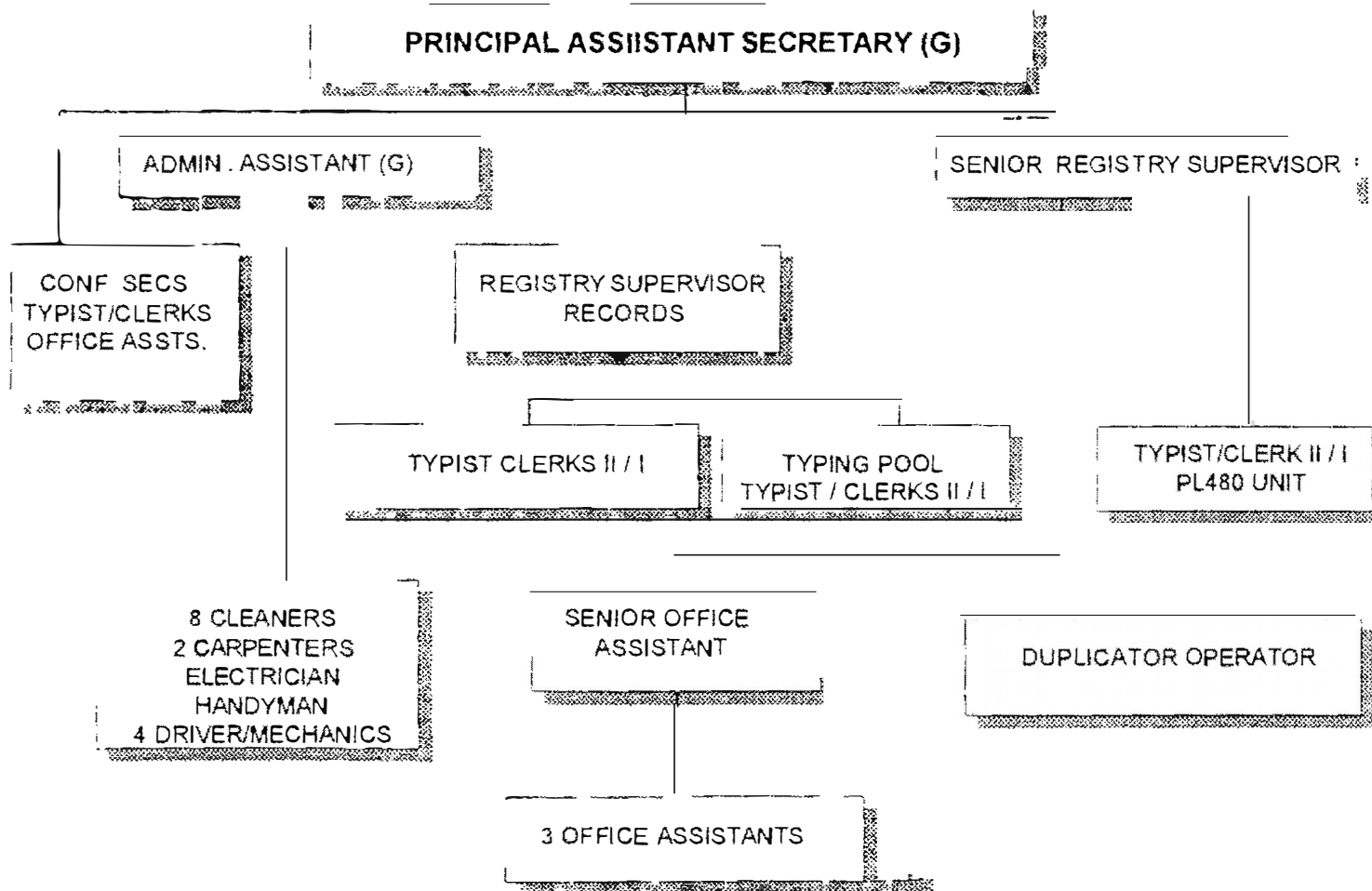


Table 1 : Administrative Division : Staffing at 1994-12-31

Position	Number Positions	Positions Filled	Vacancies
Principal Assistant Secretary (G)	1	1	
Administrative Assistant	1	-	1
Senior Registry Supervisor	1	1	
Registry Supervisor	1	1	
Typist Clerk 1/11	12	8	4
Confidential Secretary	4	4	
Duplicator Operator	1	-	1
Senior Office Assistant	1	1	
Office Assistant	5	5	
Handyman	1	1	
Cleaner	8	8	
Carpenter III	1	1	
Carpenter II	1	1	
Electrician II	1	1	
Driver Mechanic	4	3	1
Gardener II	2	2	
Gardener I	2	2	
Supervisor of Gardeners	1	1	
Total	48	41	7

Table 2 : Summary of Programme / Activities 1994

PROGRAMME / ACTIVITY	TARGET SET FOR 1994	TARGET ACHIEVED	ANALYSIS OF SUCCESS OR FAILURE
Submitting, recommending and preparing necessary documents for the attendance at Meetings, Conferences, Seminars and making all necessary travel arrangements	100%	95%	Timely preparation of documents, smooth coordination between supporting Agencies and Head Office. In a few cases documents were late in reaching the Division.
Painting of buildings and maintenance of buildings and compound	100%	90%	a) Works done by private contractors b) Staff worked overtime and on weekends
General Registry - typing, filing receiving and despatching mail, externally and internally	100%	90%	Existing staff worked overtime regularly
Mobilization of staff for official functions	as required	90%	
Ensuring adequate security services for offices, building compound etc.	100%		Contracted security services Monitoring was done by the Administrative Division Satisfactory performance by guards
Visits to Agencies/ Units of the Ministry in outlying Districts/Regions			Limited Funds Staff shortages Unavailability of transportation
Allocation and preparation of Board Room for official and other purposes	as required	100%	Administrative Division being duly informed in most cases Proper monitoring by Administrative Division
On the job training	100%	90%	
	100%	90%	In some cases information from PSM (training) was received late.
Ensuring proper Telephone and Intercom facilities	100%	90%	Faults and repairs were dealt with promptly by Guyana Telephone and Telegraph Company Limited
Arranging proper disposal of garbage	100%	90%	Contract services
	100%	90%	Work is quickly done as requested
Implementation of recommendations for the Restructured Central Registry	100%	70%	Inadequate staff Absenteeism Work was held up due to the lack of funds
Preparation of Draft Capital and Current Estimates 1995 for Administrative Division	100%	100%	Worked overtime
Preparation of list of officers who have attended Overseas Conference, Seminars etc. for period 94/1/1 to 94/12/31			

PROGRAMME / ACTIVITY	TARGET SET FOR 1994	TARGET ACHIEVED	ANALYSIS OF SUCCESS OR FAILURE
Unplanned Programmes/Activities Co-ordinating and submitting information on the insurance of vehicles and buildings belong in to the Minister to the GCIS	100%	100%	
Co-ordinating the reproduction, of the Ministry of Agriculture 1993 Annual Report for submission to Cabinet and Parliament	100%	100%	

PERSONNEL DIVISION

Functions:

The Personnel Division is responsible for the recruitment, placement and training of all personnel and administering their conditions of service within the framework of a harmonious industrial climate.

The Personnel Division is staffed by nine (9) persons (see table 3)

Acting appointments still stand for Personnel Officer II and Personnel Officer I while the two (2) positions of Clerk III (G) remained unfilled

Vacation leave due to all members of the Division was fully utilized.

The staff situation at the end of the year was as set out in Table 3

Overview

The Personnel Division provided support services for staff attached to the Ministry's Head Office and the following Divisions/Projects/Programmes:-

Crops and Livestock Division

Lands and Surveys Division
Hydraulics Division
Fisheries Division
Hydrometeorological Division
Black Bush Polder Rehabilitation Project

Infrastructure Rehabilitation Project
Drainage and Irrigation Rehabilitation Project
Artisanal Fisheries Infrastructure project
Rural Integrated Community Guyana/French (Government) Programme

During the year, several directives from the Public Service Reform Programme were implemented.

Job Descriptions / Specifications / Redesignations of a few positions are still outstanding

The Public Service Commission has approved the placement of some members of staff on the Permanent Pensionable Establishment while others are still to be finalised

Organisational changes as a result of the IDB Agricultural Sector Hybrid Loan

which stipulated that all Agricultural Extension Staff in the Regions Mahaica Mahanoron - Abary Agricultural Development Authority, be transferred to this Ministry with effect from 93-01-01 inclusive, is still to be implemented

An updated staff list for the Ministry, including all extension workers in the regions, is still out-standing

At the end of the year, there were number of vacant positions due to the rapid turn over of staff at all levels. Several recommendations were therefore necessary for acting appointment, duty and responsibility allowances

Personnel benefitted from training both locally and overseas and efforts are still on train to reconvene in-house training for staff in 1995

The 1995 Draft Estimates were completed in October 1994

Table 3 : Staff and Structure

POSITION	ESTABLISHMENT	FILLED	VACANT
Principal Personnel Officer			
Senior Personnel Officer			
Personnel Officer II			
Personnel Officer I		-	
Clerk III (G)	2		
Clerk II (G)	2	2	
Telephonist III/I			

PERSONNEL DIVISION

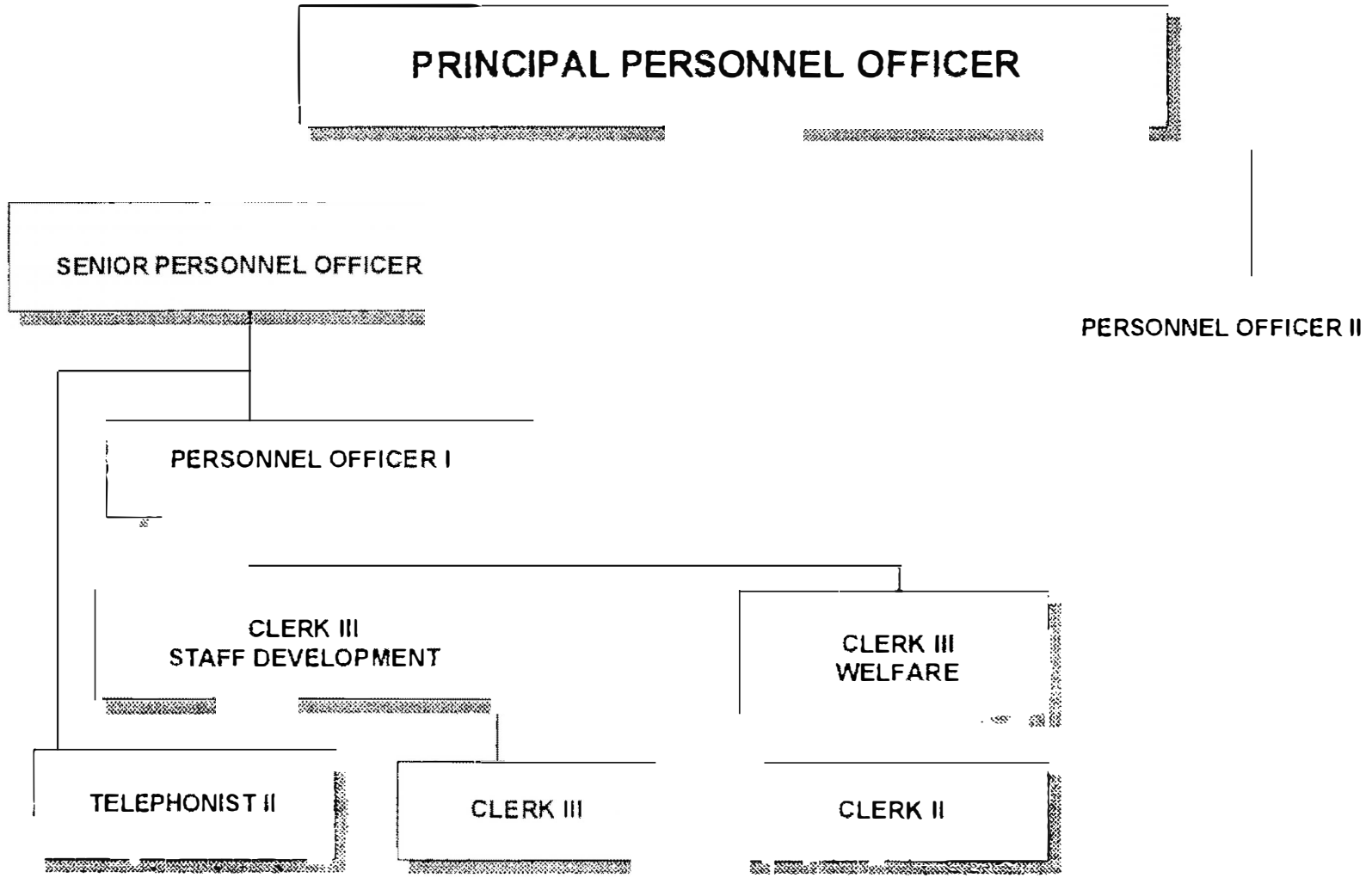


Table 4 : Summary of Programme/ Activities 1994

PROGRAMME/ ACTIVITIES	TARGET SET FOR THE YEAR	% ACHIEVED	REMARKS
Processing of Superannuation papers for employees	To submit to the Secretary Public Service Commission/Accountant General all particulars in respect of retired/terminated employees.	100	
Processing recommendations for the award of Pensionable Status to Non-Pensionable employees	To obtain approval from the Public Service Commission for all qualified staff	100	
Processing of outstanding recommendations for the appointment of professional and subprofessional staff.		70	Information still outstanding with special regard to extension staff who have been retransferred to this Ministry
Updating staff lists for Established staff	Completion of staff-list updating for each division	90	
Conducting in-house training for Ministry Personnel	To arrange necessary training seminars for staff		Absence of full staff complement
Submission of returns of recruitment/termination data to the recognized Unions/Central Recruitment Man <u>power A</u> <u>ence</u>		NIL	Shortage of staff
Submission of quarterly staff turnover analysis to the Office of the President, Public Service Management (OP, PSM)	Quarterly returns for period 94-01-01 to 94-12-31	NIL	-do-
Preparation of 1994 draft estimates of current expenditure	Completion of draft estimates (from 3, 4&5 for each division)	100	

FINANCE DIVISION

Mission Statement

To promote and support the development of Agriculture in Guyana, by ensuring that the finance administration of the Ministry is carried out in accordance with the Financial Administration and Audit Act, Financial and Stores Regulations and with respect to circular instructions.

Objectives

To manage and control all funds disbursed to the Ministry, so as to ensure that expenditures are properly

disbursed and recorded in accordance with approved programmes, the Act and relevant circulars;
 to maintain inventories of materials and equipment and ensure that they are properly controlled;
 to bring to light all deviations from established rules and procedures and to ensure that corrective action is taken to rectify the situations;
 to ensure that all payments are effected in a timely manner, within the ambit of the provisions and that all accounts are reconciled regularly;

to meet all deadlines for compliances; to advise the Accounting Officer and other Senior Managers on financial matters.

Staffing and Structure

The Division is headed by the Principal Assistant Secretary (Finance) and consists of the following Units -

- (a) The Finance Secretariat
- (b) The Central Accounting Unit
- (c) The Field Audit Unit

Table 5 Staffing 1994-12-31

Position	Number of Positions	Positions Filled	Number of Vacancies
Principal Assistant Secretary (Finance)	1	0	1
Assistant Secretary (Finance)	1	1	0
Chief Accountant	1	1	0
Accountant	2	2	0
Assistant Accountant	3	2	1
Accounts Clerk III	4	2	2
Accounts Clerk II	11	10	1
Total	23	18	5

FINANCE DIVISION

PRINCIPAL ASSISTANT SECRETARY (FINANCE)

CHIEF ACCOUNTANT

ASSISTANT SECRETARY (F)

ACCOUNTANT
PREPARATION / VOTES & EXAMINATIONS

ACCOUNTANT RECEIPTS AND PAYMENTS

FIELD AUDITOR

ASST ACCOUNTANT VOTES

ASST. ACCOUNTANT SALARIES

2 CLERKS 111 EXAMINATIONS

ASST. ACCOUNTANT PAYMENTS

2 STOCK VERIFIERS

ASST. FIELD AUDITOR

2 CLERK S 1

1 CLERKS 11

2 CLERKS 111

2 VOUCHER ROOM ATTENDANTS

6 CLERK II

Finance Secretariat

The Principal Assistant Secretary (Finance) was transferred to the Office of the President and the Chief Accountant was appointed to Act in the vacated position. This Department managed to satisfactorily complete most of its programmed activities, but failed in other areas due to non-submission of data required, timely responses from Divisions and Departments, inadequate staff and transportation difficulties, compounded by a lack of adequate funding. Contributions to International Organisations were made to WFP, CARDI, CFC, CMO, CMI and WMO.

Central Accounting Unit

During the year there were seven appointments to the following positions Chief Accountant, Accountants (2), Assistant Accountants (2), Accounts Clerk III.

There was one transfer of an Accounts Clerk II to the Central Accounting unit from the Lands and Surveys Department and the continued secondment of an Accountant to the Infrastructure Rehabilitation Programme. There were three resignations from Accounts Clerks II and III positions.

The Central Accounting Unit is responsible for the processing of all the Accounts for the following Divisions:-

1. Administration
2. Crops and Livestock
3. Lands and Surveys
4. Hydraulics
5. Hydrometeorology
6. Fisheries

and Projects

1. Infrastructure Rehabilitation Programme
2. Black Bush Polder Rehabilitation Project
3. Rehabilitation of Drainage and Irrigation Areas
4. Agriculture Rehabilitation/Hybrid Programmes; along with processing of requests for releases and the distribution of these funds to other organisations Viz:- MMA, NDDP, GSA, NARI, REPAIA and the PEU - GSI).

This represents a considerable work load. The required improved efficiency is to be realised through computerization of operations. Resignations and secondments created many vacancies, resulting in additional strain on the remaining staff.

It is recommended once again, that the additional positions of one (1) Assistant Accountant and one (1) Accounts Clerk III for the Examination and one (1) Accounts Clerk III for the Imprest Sections be included in the staff structure of the Central Accounting Unit.

Reconciliation of the Ministry's Bank

Accounts suffered, due to the inability of the Ministry to attract suitable/experienced personnel.

Field Audit Unit

This unit was required to do all inspections of the Ministry's Stores, Project Sites and "Quarry materials" Storage Areas. The acute Staff Shortage affected the work programme.

Other Activities Training

A number of officers were sent on training courses held by the Office of the President, Public Service Management (Training), while others benefitted from private sector sponsored short courses and a few privately pursued courses offered by the Government Technical Institute, Critchlow Labour College, etc. In addition, the usual on the job training of staff, continued. There were no organised in-house training sessions during the year, due to the heavy workload and unavailability of funds.

PL 480 (Title III Programme) All of the PL 480 reimbursements received from the Bilateral Division - MOF were immediately paid to the Accountant General's Department as required and acknowledgment receipts were received.

Table 6 : Finance Division : Summary of Programme/ Activities 1994

PROGRAMME/ ACTIVITIES	TARGET SET FOR THE YEAR	%TARGET ACHIEVED FOR THE YEAR	ANALYSIS OF SUCCESS OR FAILURE
(A) Finance Secretariat			
a Preparation of documents, applications and record of payments of contributions to foreign organizations	Sixteen International Organizations 16	42	Six (6) Organisations were paid.
b Tender Board Procedures and awarding contracts	Contracts 852	114	Increase in contracts awarded by all Departments, Divisions and Projects
c Processing matters related to losses and accidents		25	Insufficient Data often delayed processing
d Investigations and replies to Audit queries	100	100	
e Preparation of Annual Estimates	Six(6) Departments	100	Submitted in Draft to Ministry of Finance
f Visits to Departments/Projects	12	17	Limited funds available for transportation.
g Training on the job. (General)	12 sessions	0.00	Resignations, transferral of officers, limited funds and a heavy work load on the remaining officers
h Attending meetings (General)	100	100	Staff conferences, other Department and Agencies, etc.
Current and Capital Releases Meetings	24	100	Monthly meetings for releases at Ministry of Finance
(B) Central Accounting Unit			
a. Submit compliance certificates and financial statements to the Secretary to the treasury and other Agencies	Twelve (12) to be submitted	100	The staff usually worked extra hours to complete task
b. Reconciliation between Vote Account Book and Report prepared by the Data Processing Division	Monthly	0.00	Non-submission of Reports from Data Processing Unit.
c. Submit Yearly Completed Forms II to Commissioner of Inland Revenue.	One (1) by the 30th April	100	

P	ACTIVITIES	TARGET SET FOR THE YEAR	%TARGET ACHIEVED FOR THE YEAR	ANALYSIS OF SUCCESS OR FAILURE
d	Submit fortnightly and monthly completed NIS Form No. CS4 to General Manager, National Insurance Scheme	Quarterly	100	
e	Request for withdrawals and remittances from Accountant General Bank Account	Twenty-four (24)		Additional requests due to CFAW & IDAW received
f	Submission of contractors Return (IRD)	One (1) by the 30th of April	100	All Departments and Projects
g	Return of Mileage (PSM)	Half-Yearly	100	
h	Return of Loan Repayment (AG)	Half-Yearly	50	July-December not submitted
	Return of Revenue paid into consolidated Fund Account or banked in the Accountant General Bank Account	Daily		Supplementary to be submitted in January 1995
	Submission of Half-Yearly Statement of Revenue collected	Two (2)	100	Supplementary to be submitted in January of 1995
k	Reconciliation of analysis of Revenue Accounts with Data Processing Unit (DPU) Print out	100	0.00	No Statements received from (DPU) Ministry of Finance
	Submission of Collector's Cash Book Statement (CCBS)	Daily	100	Supplementary submissions made
m	Register of Accountant General's Deposit Fund reimbursement for the month	12	95	Reimbursement received up to December 29 1994
n	Deposit Fund Receipt collected and paid into Deposit Fund Account or banked in Accountant General's Bank Account	Daily	100	
o	Reconciliation on analysis of Deposit Account with Data Processing Unit (DPU) Report	100	75	Completed up to August 1994 using actual records at AG Department Ministry of Finance
p	Bank Reconciliation of Mam Bank Account No. 938	100	50	Staff shortage - Reconciliation up to December 1993
q	Bank Reconciliation of Imprest Bank Account No. 939	100	92	Staff shortage - Reconciliation up to November 1994

PROGRAMME/ ACTIVITIES	TARGET SET FOR THE YEAR	%TARGET ACHIEVED FOR THE YEAR	ANALYSIS OF SUCCESS OR FAILURE
r. Bank Reconciliation of Salaries Bank Account No. 940	100	0 00	Staff Shortage - Reconciliation up to November 1992.
s. Bank Reconciliation of the Deduction Bank Account No. 941	100	0 00	Staff Shortage - Reconciliation up to December 1992
t. Voucher Submission to Data Processing Unit	Daily	42	The DPU was not accepting submissions, as such none were made for 1992, but those for 1993 and for January - March 1994 were uplifted by the DPU.
u. Bank Reconciliation PL 480 Title III - Alc C/A - 655-709-7	Monthly	0 00	Staff Shortage
C Field Audit			
a. Inspections of all operational work sites	Monthly	50	Affected by the retirement and resignation of F/A Staff
b. Stock verification of Stores	12 stores	80	Staff Shortage
c. Unit inventories	14 inventories	70	Staff Shortage
d. Audit inspections	12 inspectors	80	Work undertaken on an urgent basis. This resulted in the rescheduling and non-completion of other planned activities.
e. Miscellaneous inspections, audits etc.	Unprogrammed	100	
f. Verification of all Quarterly materials delivered to all IRP locations	100	25	This is due to the F/A Staff being given adequate notice by the IRP Department and the staff shortage.

PLANNING DIVISION

Mission Statement:

To promote and support the development of agriculture in Guyana through the co-ordination and monitoring of agricultural plans and programmes and through the compilation and analysis of statistics on the sector.

The Functions of the Division

the collection, compilation, analysis and dissemination of agricultural statistics; examination of specific policy related matters, investment priorities, resource use, agricultural prices, nutrition, agricultural marketing and trade, and cost of production; updating the Agricultural Development Plan, examining the feasibility of projects and assisting in the preparation of various project proposals and profiles and; monitoring and evaluating selected projects with a view to providing information to guide project management and other decision makers on project performance.

Organization and Structure

The Division is headed by the Chief Agricultural Planner and is organized in four (4) technical units, in correspondence with the above

mentioned functions:-

- (i) Statistics
- (ii) Policy Analysis and Special Studies
- (iii) Planning and Projects
- (iv) Monitoring and Evaluation

There is also a small administrative support section which complements the operations of the technical units. The organizational chart is shown below.

Staffing

During 1994, one (1) person, an Overseas Development Institute Fellow joined the staff while nine (9) persons left the staff. Of those who left three were officers on contract from development agencies whose contracts had come to an end, and three others resigned their positions, two as crop Reporter I and one Planner II.

The services of the Computer Operator were terminated by the East Bank Development Project, and the department lost the services of a Crop reporter I who died.

Training

A typist/ clerk attended training courses in Professional Secretarial Practice and Typing Techniques.

Summary and Review of the Year's performance

Highlights of the Division's work during the year included:-

The publication of the Digest of Agricultural Statistics 1993

Paper on NAFTA and its implications for CARICOM with special reference to Guyana

Preparation of the cost of Production of 13 crops

Paper on an Assessment of the Utilization of Facilities at Charity, Lima and Supenaam

Preparation of Project Status Report for the East Bank Essequibo Project

Two (2) surveys were done. These were the Cattle and Milk Production Survey and the effects of the East Bank Essequibo Development Project on it's beneficiaries. Several reviews of project documents and reports were done among which were

Review of the Corporate Plan for the New Guyana Marketing Corporation.

Review of a document on Quality Control of Non-Traditional Products for CARICOM and the OECS

Other major achievements were:-

The preparation of a project proposal for the support to the Agricultural Census Project

A detailed study of Fruit Production and Consumption present trends and prospects

Preparation of policy papers on Agricultural Marketing, Women in Agriculture, Nutrition and Livestock

PLANNING DIVISION

CHIEF AGRICULTURAL PLANNER



Table 7 : Planning Division :Staffing at 1994-12-31

POSITION/CATEGORY	APPROVED POSITIONS	FULL-TIME POSITIONS	CONSULTANT POSITIONS
Chief Agricultural Planner	1	1	-
Planner IV	2		2
Planner III	2		2
Planner II	2		
Planner I	2		2
Statistical Officer	2		2
Agricultural Tech. Assistant II/3	4		
Confidential Secretar			0
Typist/Clerk III			0
Total Established Posts at Head Office	17	6	11
Field Staff - Crop Reporters	53	29	24
Total Established Posts	70		
CFTC CONSULTANT			
Dr. M. Ahmed - Agricultural Economist (Policy Analysis)			

Table 8 Planning Division : Summary of Activities 1994

PLANNING/ACTIVITY	TARGET SET FOR THE YEAR	TARGET ACHIEVED FOR YEAR %	ANALYSIS OF SUCCESS/FAILURE
Guyana Digest of Agricultural Statistics 1993	Publication of Digest	100	
Supply of Data to Local and International Agencies	On-going	On-going	Data supplied on request
Cattle and Milk Production Survey	Completion of Survey	100	Results submitted to the National Dairy Development Programme and Chief Crops and Livestock Officer
Preparation of the Annual Report 1993 - Ministry of Agriculture	Completion of Report		
Cost of Production Survey of selected other crops	Completion of Costs of Production	100	Cost of production of 13 crops completed
Preparation of the Project document for the support to the Agricultural census Project	Preparation of the report	100	Documents submitted to the Ministry of Foreign Affairs and UNDP
Review of the Corporate Plan for the New Guyana Marketing Corporation	Completion of the review		Submitted to NGMC board of directors and to the Senior Minister of Agriculture
A detailed study of Fruit Production and consumption Present trends and prospects	Completion of study	100	Submitted to the Permanent Secretary and the Senior Minister of Agriculture
Preparation of a report on "Findings and Recommendations of the task force on Marketing"	Completion of report		Submitted to the Senior Minister
Review of Document on Quality Control of Non-Traditional Agricultural Products for CARICOM and the OECS	Completion of document	100	Submitted to the Permanent Secretary
Preparation of a background paper on NAFTA and its implications for CARICOM with special reference to Guyana	Completion of paper	100	Submitted to the Presidential Secretariat through the Ministry of Foreign Affairs
Preparation of Policy Papers on Agricultural Marketing, Women in Agriculture, nutrition and livestock	Preparation of papers	100	Papers incorporated in document "Priority Actions for the Agricultural Sector"

PLANNING/ACTIVITY	TARGET SET FOR THE YEAR	TARGET ACHIEVED FOR YEAR %	ANALYSIS OF SUCCESS/FAILURE
An Assessment of the Utilization of Facilities at Charity, Lima and Su lenaam in Re ion 2	Completion of study	100	Submitted to the Permanent Secretary
Preparation of 1993 Project Status Report for the East Bank Essequibo Development Project (EBEDP)	Completion of Report	100	Report forwarded to the Permanent Secretary and IFAD
Preparation 1993 Annual Progress Report for EBEDP	Completion of Report	100	Report forwarded to Project Management and IFAD
Survey of the effects of the EBEDP on beneficiaries	Completion of Report	100	Submitted to Project Management and Permanent Secretary

AGRICULTURAL PROJECT CYCLE UNIT

Background

The Agriculture Project Cycle Unit (APCU) was formed in late 1993 and reports directly to the Permanent Secretary. It is engaged in all aspects of the project cycle with particular reference to the identification, preparation, implementation and monitoring of projects in the Agriculture sector. By overseeing and coordinating the entire procedure, the APCU is in a position to provide information and advise Government and donors alike, resulting in a more rapid and effective allocation of resources.

During 1994, the unit:

1. participated in negotiations with donor and technical assistance agencies with respect to project identification, preparation and implementation;
2. ensured that conditions precedent to disbursement of loans and funds were met;
3. monitored the project implementation process and prepared reports on project status;
4. monitored and facilitated access to technical assistance programmes;
5. analysed key policy areas which impinge on project implementation, and
6. prepared the annual review of the agriculture sector

Staffing

During 1994, the Unit was staffed by the following persons:

Mr Nigel Durrant- Agricultural Economist/
Head of Unit (C/F/C Consultant)
Dr Ifeanyi Nwike- Agricultural Economist
(C/F/C Consultant)
Ms Dharmattie Sohai - Technical Assistant

to the Minister
MS Rachael Stringfellow - Senior Planner
(ODI Fellow)
Mr Andrew Goodland (ODI Fellow) Mr
Arnold DeMendonça - FAO programme
Assistant
Dr. Mark Pierre- Veterinarian.

Dr Ifeanyi Nwike departed in October at the end of his contract with the Commonwealth Secretariat. Ms Stringfellow also left the Unit at the end of her fellowship with the Overseas Development Institute (ODI) in September, and was replaced by Mr Goodland. Ms Sohai went on leave in September pending her resignation from the Public Service. Dr Pierre, who was on assignment from the Crops and Livestock Department, did a stint of one (1) month with the Unit.

Highlights of APCU Activities in 1994

Policy Development

Agricultural Sector Policy Document

During the year, much effort was expended on the preparation of an agricultural sector policy document. This document, which covered all sub-sectors and support services, was completed in draft and entitled "Policies and priority Actions for the Agricultural Sector". Prior to its completion, the Unit consulted extensively with departments, allied agencies and the private sector. This document is intended to form the basis of project identification and prioritisation over the coming years.

Agricultural Sector Planning Strategy

Towards the end of the year, the Head of Unit collaborated with Professor Max Langham from the University of Florida on

a paper which assessed the planning needs of Guyana. This was carried out under the auspices of the Global Development Initiative and the Carter Center in response to a request from Government and as part of the process leading to the formulation of a National Development Strategy.

Project Identification

World Bank Secondary Towns Infrastructure Project

APCU liaised with incoming World Bank/FAO consultants and facilitated the identification of agricultural investment components for this programme, resulting in the decision to focus the project on the development of non-traditional crops and livestock.

Agricultural Census

It is sixteen years since the last national agricultural survey was conducted (Farm Household Survey 1978). Policy makers and planners within the Ministry are therefore forced to base their decisions on information which is not up-to-date. During this year, international agencies UNDP and FAO have shown an interest in conducting an agricultural census or a series of surveys to rectify this situation.

Project Preparation

IDB Shorezone management programme

The proposed Shorezone Management Programme will be worth around US\$18 million if approved. It aims to assist the Government in resolving shoreline management issues in an integrated and environmentally sound manner, thereby contributing to the sustainable development of the country's coastal zone.

During the year, IDB funded the consultancy firms SWEDEPLAN to complete a "Design and Feasibility Study" and Coniber & Associates to complete an "International Assessment". These studies will form the basis of the programme

The APCU assisted the consultants and was represented in the technical Working Group which was set up to discuss with SWEDEPLAN the development of their study and provide guidance to them.

IDB Agricultural Support Services Programme (ASSP)

As part of the IDB Agricultural Loan, the ASSP will focus on the implementation of policies identified in the Sector Loan, and also identify and remove constraints to the development of small farms. Canadian consultant Agrodev arrived late in the year to begin the preparation of this project and collaborated closely with the Unit

Other

Work was also done on initial proposals for the development of the Kimbia area for agricultural settlement

Project Implementation and Monitoring

IDB Agricultural Sector Loan

This loan will supersede the Agricultural Sector Hybrid Loan, the policy conditions of which the Government was not in a position to fulfil due to their unrealistic nature. The Agricultural Sector Loan (ASL) will support the Government in reformulating policy issues initially covered by the policy component of the Hybrid Loan. The focus of policy conditions associated with the loan are: rice trade liberalisation and institutional reform; drainage and irrigation institutional and policy reform; and land market development and institutional reform. The loan will be worth US\$30 million in balance of payments support.

The APCU spearheaded negotiations of these issues, coordinated the Ministry's responses to the issues raised by the IDB, and aided in fulfilling the conditionalities

Rice Trade Liberalisation and Institutional reform

On 28th June the new Rice Act was passed by the National Assembly which provided for the formation of the Guyana Rice Development Board which is charged with promoting the rice industry and facilitating the export of rice products. The APCU was instrumental in finalising the legislation as well as the governing structure of the Board

Drainage and Irrigation Institutional and Policy Reform

The Drainage and Irrigation (Amendment) Act was signed by the President on July 30th. This provided for the reconstitution of the Drainage and Irrigation Board which began meeting again from September, and on which the APCU has observer status. The Board will now develop policy governing the entire drainage and irrigation system. The APCU is assisting in the development of the new legislation.

Land Market Development and Institutional reform

ODA have been providing technical assistance in this area and are preparing action plans based on consultations with the Ministry to implement the reforms.

CDB Loan for Guysuco Pump Rehabilitation

This loan is worth US\$5 million and is to be channeled through the Ministry to Guysuco. CDB attached several pre-conditions to the loan which have to be satisfied before loan disbursement can commence. One of the conditions required the reconstitution of the Drainage and Irrigation Board which came into effect with the passing of the Drainage and Irrigation

(Amendment) Act in July. Other conditions have proved more difficult to achieve, notably the declaration of Guysuco Estates as Drainage and Irrigation Areas, and the signing of an agreement to define the terms and conditions of the project. These required extensive negotiations between the various parties, at which the APCU represented the Ministry as well as detailed drafting of the new legislation. By the end of the year all conditions were close to completion.

Rural Community Development (French Assistance) Programme

Under this programme, funds are available for the integrated development of three communities and the rehabilitation of the Timeliri Nursery. The Unit was called upon to review the progress of this project and to recommend a course of action for the remainder of the programme. This involved several visits to the communities and the preparation of a report on programme activities along with recommendations. The programme has since been handed to IICA for implementation.

East Bank Essequibo Development Project

This Project, designed to improve infrastructure and services for small farmers, is nearing completion. APCU prepared status reports and drafted a post-implementation study of the project.

Sea Defences

Implementation of this project is being conducted by a Project Execution Unit based in the Hydraulics Division of the Ministry. By December 1994, the four different elements of the project, funded by the European Commission, Caribbean Development Bank, and the

International Development Agency and Inter American Development Bank respectively, were at different stages. The EC section is most advanced with work due to begin in early 1995, whilst the IDB stretch still awaits the engagement of consultants and is likely to be the final stretch to be completed, estimated to be late 1996 to early 1997.

Investment component of IDB Agricultural Sector Hybrid Programme

This involves the rehabilitation of sea defences mentioned above, together with a rural road rehabilitation programme, for which 23 miles of access roads in Region 5 and 20 miles in Region 3 have been identified for rehabilitation.

Further Activities

The Unit prepared a status report on capital projects setting out expenditure to date, progress achieved and problems

encountered in implementation. In addition, an analysis of the benefits derived from international organisations to which financial contributions are made, was also done.

The Unit also facilitated access to various bi-lateral technical assistance programmes including those by India, Japan and Columbia.

Agricultural Sector Review and Ministry of Agriculture Annual Report

The APCU compiled and drafted the annual Agricultural Sector Review and Annual Report for 1993

Water Management Task Force

The APCU was instrumental in establishing this task force, the main objective being to review current issues and devise appropriate institutional mechanisms for the management of drainage and irrigation and

sea defence operations

Technology Development

In collaboration with HCA, the Unit successfully proposed the establishment of a Task Force on Agricultural Technology aimed at reforming the existing systems for research, extension and training (RET). HCA provided technical assistance through the fielding of three short term experts from Latin America who gave the benefit of their experiences. Proposals emanating from the Task Force were contained in a document on RET produced jointly by HCA and the Ministry.

Policy Statements

The Unit was, also called upon to prepare policy statements on a variety of topics for the Minister and Permanent Secretary

CROPS AND LIVESTOCK DEPARTMENT

Objectives

To promote and support the development of agriculture in Guyana through the provision of a range of technical and regulatory services to the Sector.

Staffing and structure

The Department is headed by a Chief Crops and Livestock Officer (CCLO) and consists of the following Divisions and Units

Animal and Plant Health Division

- Livestock Farm
- Field Services
- Poultry and Animal Health
- Quarantine Unit

Extension Services Division

- Crop Services Division
- Wildlife Division

Training

See Table 9 below

Main Features of 1994 Work Programme

Animal Health

The prevalence of bovine tuberculosis in Guyana is about 11%, and according to PAHO/WHO statistics (1991) is the second highest in South America

A national consultation on the proposal "Bovine Tuberculosis Eradication" and on the draft Public Health Act was held in conjunction with GAHEF (Guyana Agency for Health Education, the Environment and Food Safety), in October of the year, to which members of the medical fraternity were invited. The proposal is at the stage where parliamentary approval has to be given for specified areas to be declared T.B. infected before the programme proper could be launched

Attempts were made to diagnose bovine rabies in cattle in Essequibo, with the assistance of the Veterinary Diagnostic

Laboratory of Trinidad & Tobago, but all specimens submitted were found to be negative. Deaths nevertheless continued to be reported in Essequibo from what appeared, clinically to be rabies, accompanied by reports of vampire bat activity in that region. In light of this a rabies vaccination campaign is scheduled for 1995 in the Essequibo at the same time as vampire-bat control will be undertaken

Materials for this activity were received from PAHO/WHO during the reporting year

The animal quarantine situation remained to be remedied. The station became non-functional in 1991. The use of kennels owned by the Police Force and located at Eve Leary, was extended to the Ministry for the quarantining of cats and dogs belonging to diplomats, but the administration of these proved less than acceptable, and the venture was abandoned. No cats or dogs requiring quarantine were therefore admitted from about the middle of the year

Table 9: Crops and Livestock Department : Training Activities 1994

Activity	Target Set	% Achieved	Analysis of Successes/Failure
Regional training	6	0	These sessions were canceled due to inaccessibility of finances.
In-service training	12	4=32%	This low rate was due mainly to the resignation of the only technical assistant and this acute staff situation prevailed all year.
-Crops	(6)	(1)	
-L/Stock	(6)	(3)	
Regional visits	12	6=50%	

CROPS & LIVESTOCK DEPARTMENT

CHIEF CROPS & LIVESTOCK OFFICER

SECRETARIAT

ANIMAL &
PLANT HEALTH

CROP
SERVICES

EXTENSION
SERVICES

WILDLIFE
SERVICES

Table 10 : Crops and Livestock Department : Summary of Livestock Activities 1994

Programme / Activity	Target Set	Achievements	Analysis of Success or Failure
Livestock Farm, Mon Repos			
Duck Farming	20,000	18,488 92.4%	The old breeders were culled and a set of replacements introduced into the flock. Production was however severely hampered by the following - poor quality feed, inadequate amounts at the appropriate times, staff shortages, inadequate housing, inadequate electricity supply (blackouts), and the declining genetic potential of the breeders
*Ducklings	13,000	9 199 70.76%	Hatchability ranged from 62% - 70.3%, while fertility scored 78.280%. The same constraints mentioned above affected duckling production. Sales were a weekly routine and the same prices prevailed throughout 1994. Bejings retailed at \$35, and Kunshans at \$34. A total of 1100 ducklings were selected as replacements.
*Sales	10,000	7,540 75.4%	
Revetment of ponds & bridge maintenance Dairy Development & Breeding		Nil Nil	Funds not available
Births Milk Production	15 calves 4,000gls	9 calves - 60% 3,188 - 79.71%	There were fourteen casualties which arose from water shortages, insufficient staff and lack of pastures on the Farm, coupled with the unavailability of drugs. Two dairy animals were transferred to REPAPHA for teaching purposes. Inadequate nutrition affected regular dietary intake by the productive animals
Buffalo births	8 Calves	9 Calves - 75%	Two calves and one cow died as a result of unhygienic conditions on the farm.
Animals sales	8	6 - 75%	No weaner calves were sold despite several applications.
Calf pen repairs		Nil	Funds were not available.
Pasture establishment		Nil	Ditto
Foot & Mouth Disease (FMD) surveillance	Fellowship in FMD surveillance	100%	The veterinary officer assigned to Region 9 undertook a PAHO/WHO Fellowship at the Pan-American Foot & Mouth Disease Center (PAFMDC) in Brazil from September 5 - October 7, in FMD surveillance and animal health programme planning. This course will form the basis of a programme for FMD surveillance etc. No such surveillance was done due to the absence of a resident V.O. and the unavailability of transportation. Sera from cattle on the coast has been prepared for submission to PAFMDC for FMD testing. This will be sent early in 1995. The Chief Veterinary Officer attended the annual meeting of the South American Commission for the Control of FMD in Peru in March. Arrangement for FMD fellowship were finalised there.

Programme / Activity	Target Set	Achievements	Analysis of Success or Failure
Movement of Veterinarians	Not Applicable (NA)	NA	The position of V O Region 5 was filled in August by veterinary graduate trained in Brazil. A Veterinary graduate trained in Czechoslovakia, joined the staff in January and has been assigned part-time to the CARDI/CIDA Regional Sheep Marketing & Production Project, which is located in Region 5.
Animal Health Activities	4	75% (3 of the 4 that were planned took place. Two additional activities were involved)	<p>An ICA sponsored workshop on the diagnosis of ruminant trypanosomiasis was held in February for 3 days. A veterinary researcher from French Guyana was the resource person. Two US Army VETRETTs (Veterinary Readiness Training Exercises) were held in April in Region 5 and in August in Region 2, each lasting 10 days. The second of the two was the most successful. On these exercises US Army Veterinary Teams would come to Guyana with basic drugs, anthelmintic, antibiotics, etc. and work with local personnel in prescribed areas on small farmers' animals. Rabies vaccine (cattle) should have been brought for the second trip but a communication mix-up prevented this.</p> <p>A national consultation on the proposal for the eradication of bovine tuberculosis from Guyana was held on October 28, at the St Stanislaus Dairy Training Center. Recommendations arising from the meeting are to be circulated to participants. Unfortunately no medical personnel attended, including the Medical Officer responsible for T.B. who was to deliver a paper on Human Tuberculosis in Guyana.</p> <p>The annual tripartite (Brazil, Venezuela, Guyana) border meeting on FMD did not take place in Boa Vista owing to the inability of some of the participants to attend. It is scheduled to be held early in 1995. A PA/FMDC sponsored workshop on animal eradication programmes should have been held in September but this was postponed to 1995 owing to its proximity to the bovine T.B. consultation.</p> <p>Youth Challenge International (Canadian based service organisation) offered to assist with the haemoparasite project during their project cycle in the Rupununi, owing to the presence of a veterinarian on the team. The undertaking was unsuccessful however due to logistical problems and the inexperience of the veterinarian.</p>
Animal Health Activities continued			

Programme / Activity	Target Set	Achievements	Anal	Failure
Other Diseases: Brucellosis	Coastal	Nil		
			A quantity of brucella abortus antigen was sent from Uruguay in the wake of a CARICOM Veterinary Mission to that country. The reagent arrived on cold storage and its efficacy could not be vouched for. Brucellosis screening could not therefore be carried out.	
Serum Bank	1000 sampled			
			Sample collection was limited to the Georgetown abattoir and covered mainly Regions 4, 5 & 6. Visits will have to be made to the other regions for sera.	
Bovine Tuberculosis Eradication Proposal	Submission to Minister of Agriculture	Submitted in April		
	Discussion by Senior Staff.	Discussed in October		
			The programme should have commenced in 1994, but was delayed again due to legislation not having been drafted and equally important, the unavailability of vehicles to execute the programme. Funds were voted for field work however. The programme should commence in Region #2. An area is to be identified and demarcated, then gazetted. This would allow the eradication programmes to be implemented with the full support of the Animals Disease Act. A STC will be made available through PAHO/WHO when required.	

Programme / Activity	Target Set	Achievements	Analysis of Success or Failure
Bovine Paralytic Rabies	Bat trapping in Region 2	Nil	<p>Mist nets (25) several bottles of "Vampiracid", the chemical used to paint vampire bats prior to their release after being trapped, and three pairs of leather gloves were obtained through PAHO/WHO, for vampire bat trapping. This could however not have been implemented owing to the inability of PAHO/WHO to obtain a supply of human vaccine, from Venezuela, for the technicians who would be doing the trapping. Attempts are still being made to procure the vaccine.</p> <p>Brains were removed from two calves in Region 2 shortly after death, by a US Army Veterinary Reserve team, and specimens set in formalin and glycerol were sent to the veterinary laboratory in Trinidad for histology and mouse inoculation tests respectively for rabies. Both procedures were negative. A histological examination was similarly conducted in Guyana but only indicated that a viral inflammatory response had taken place. Negri bodies were found (this in itself is not conclusive of the absence of rabies). Thus despite the animal in life demonstrating what were considered by the US team to be classical signs of rabies, no laboratory confirmation was forthcoming.</p> <p>Reports of suspected rabies and vampire bat activity continue to come from the Regions. Five thousands doses of bovine vaccine have been ordered despite the lack of laboratory confirmation, but the order is based on rabies in the Essequibo and the continuous activity of vampire bats there. The vaccine will be administered early in 1995. Over 80 cases are suspected of having occurred during the year.</p>

Poultry

Production of poultry meat matched imports this year. 13.7 M lbs were produced while 13.4 M lbs were imported from the U.S.A. This production represented a 53.4% increase over production in 1993, compared to a 16% increase in importation over the same period. There was a greater number of broiler hatching eggs imported in 1994 i.e. 16,468 cases as compared to 10,942

imported the previous year which is believed to be responsible for this rise in production of poultry meat. This trend began in 1993 since the implementation of tax relief measures.

Table egg production showed a greater increase over that of broiler meat with 17.1 M eggs being placed on the market as

against 8.6 M in 1993, representing an increase of 101%

No multiplier units were established in the industry. Feed production by Guyana Stockfeeds Ltd. continued to be well below the rated output, and the demand for the product was still considered to be low.

Table 11: Summary of Poultry Activities 1994

Programme/ Activity	Target Set	% Achieved	% Year's Target Achieved	Analysis of Success/ Failure
Poultry				
Extension Visits	Nil		Nil	Extension staff - Livestock Officer (L. O's), Livestock Assistants (L. A's) of Regions 2, 3, 4, 5, 6 & 10 as well as Head Office staff made routine farm advisory visits. All L.A's did not work with the material help, since help did not extend beyond the life of the pilot stage. L. A's also found it conflicting to execute both the animal health and livestock programmes at the same time.
Pilot Farmer Selection				
Creole fowl competition	5 (1 each in Regions 2, 3, 4, 5, & 6)	Nil	Nil	Regions 3 & 5 - No interest was demonstrated in these Regions. Region 4 - 4 farmers initially participated but their waning interest and floods at that time resulted in the discontinuation of these activities. Region 6 - This activity was abandoned due to rice harvesting and flooding.
Poultry				
Diseases	N.A.	N.A.		Deaths were again experienced among broiler birds on the East Bank, Demerara, due to what appeared to be a severe E. coli-type septicaemia. Mature birds 6 - 7 weeks of age were affected as well as younger ones. The previous cause of high mortality among broiler birds has not been fully elucidated as yet. Newcastle disease antibodies were found in some of the sera tested, but this is not unusual where birds are vaccinated against this disease.

Abattoir Surveillance

Slaughter returns showed that 24,232 cattle (13,824 M, 10,408 F) and 8,475 swine were slaughtered throughout the country with 50% of the cattle being slaughtered at the Municipal Abattoir, Georgetown.

It was also shown through the TB surveillance programme that 11 entire and 12 partial condemnations of bovine carcasses for tuberculosis were made, with 125 of these being recorded at the Georgetown abattoir. One entire porcine carcass was condemned in Region 6.

Abattoirs proper in Guyana are to be found in Georgetown, Plaisance, East Coast Demerara, at New Amsterdam and Bartica. Slaughtering elsewhere is conducted in slaughter houses or in "bottom house" conditions. This is the case with sheep in particular.

Table 12 : Summary of Abattoir Surveillance

Programme/ Activity	Target Set	Achievements	Analysis of Success or Failure
Abattoir Surveillance	Country-wide i.e. Regions 2, 3, 4, 5, 6, 7, 9 & 10	50 % (Regions 4, 6, 7 & 9)	Slaughter returns on all classes of livestock slaughtered as well as condemnations for TB in cattle and pigs were received. No returns have been received from Regions 2, 3 & 5. This is being rectified. The Division is presently responsible (since last year) for collecting and collating slaughter returns country-wide for submission to the Ministry's Planning Department and the NDDP.

Table 13 : Summary Abattoir Activities Regions 1 - 10

Region of Slaughter	No. Animals Slaughtered			Total W.T. (lbs)	Parts Condemned			
	M	F	Total		Heads	Organs	Partial Condemnations	Entire Carcasses
Region 1	-	-	-	-	-	-	-	-
Region 2	11	5	16	8.000	-	-	-	-
Region 3	671	205	876	221.657	-	-	-	-
Region 4	3,951	2,289	6,240	1,629,751	-	-	-	-
Region 5	-	-	262	58,492	-	-	-	-
Region 6	2,641	998	3,612	944,440	2	20	1	1
Region 7	291	173	464	120,640	1	-	-	-
Region 8	-	-	-	-	-	-	-	-
Region 9	819	61	880	352,000	-	-	-	-
Region 10	-	-	-	-	-	-	-	-
Georgetown Abattoir	5,440	6,677	12,117	3,780,250	-	23	11	114
Totals	13,824	10,408	24,232	6,994,590	-	43	12	115

Region of Slaughter	No. Animals Slaughtered			Total W.T. (lbs)	T.B. Condemnation		
	M	F	Total		Parts Condemned		
				Heads	Organs	Partial Condemnations	Entire Carcasses
Region 1							
Region 2			2	6			
Region 3			180	19,704			
Region 4			3,190	331,565			
Region 5	-		62	2,480			
Region 6	926	497	1,423	122,315			
Region 7	-						
Region 8	-	-					
Region 9	-						
Region 10	-						
Georgetown Abattoir	-		3,607	342,665			
Totals	(926)	(497)	8,475	819,329			

Extension Services

This was the second year of operation for the recentralised extension service and the calendar of activities previously initiated was continued, except that it was adjusted for two (2) of the thirteen commodities, viz., rice and livestock development. The rice programme was transferred to the newly formed Guyana Rice Development Board (GRDB) and livestock development was absorbed into the poultry programme. The latter was due to the secondment of the co-ordinator for that programme to REPANHA (Regional Programme for Animal Health Assistants). Rice was replaced by a "crop improvement programme.

Execution of the extension programme continued to be challenging. The disbursement/expenditure of operational funds and the subsequent processing of vouchers for reimbursement and clearing of advance, proved to be rather daunting due to the rigid application of outmoded and archaic financial regulations, amplified by the paucity of clerks in the Accounts Unit which makes it difficult the Unit to adequately deal with the increased influx of vouchers.

Staff recruitment was unsuccessful during the year in review as graduates of the University of Guyana (UG), the Guyana School of Agriculture (GSA) and REPANHA, sought employment elsewhere because of the still inadequate level of remuneration in the Public Service. Despite these constraints serious attempts are being made to provide hinterland districts such as the Rupununi, with professional crop extension staff. That district has not had a graduate Agriculture Officer since around 1987.

Staffing

The present staffing situation is of grave concern to all. At least 10 persons at the lower operational level have resigned, all

for more lucrative forms of employment. This has resulted in the further decline of staff morale. Staffing at the supervisory level was better than at the executional or ground level. This left senior staff with control over a few subordinate personnel, or in extreme instances, with no lower level functionaries at all.

Transport

Apart from their own personal means of transport, regional staff had no official means of transport during 1994. The riverain regions such as Regions 1, 7 & 8 are largely accessible only by river, and provision is being made for boats and outboard engines to be purchased in 1995 for use there.

Supporting Services

There still remained in 1994 only one pool of decentralised accounting personnel to service all the geographic locations. Persons in the regions still have to travel to Georgetown to uplift all payments including their salaries and allowances. This continues to be the most serious constraint.

Housing

The housing situation in the regions remained unchanged as houses at Hosororo, Essequebo, Rupununi and elsewhere continued to be in dire need of repairs. One of the houses at Bartica, fell off its off blocks. However, the Veterinary Officer's house in the Rupununi was provided with a solar unit and furniture, and a house was finally provided for the Veterinary Officer in Essequebo.

Infrastructure

Nurseries in all regions were in somewhat better condition than other structures. Repairs were nevertheless limited owing to insufficient funds. Which curtailed some of the planned programmes.

Organisational Constraints

The Ministry originally enjoyed a monopoly in providing extension services to farmers, however the Ministry now has to compete with both private and public sector agencies

in taking these services to the farming community. It is therefore anticipated that a restructuring of the service will be undertaken in the near future.

Plant Quarantine

Imports/Exports

The Plant Quarantine Unit (PQU) continued to service exporters and importers of plant and crop materials in the issue of phytosanitary certificates and import permits. The growing volume of exports of non-traditional crops has placed a heavier demand for services of the PQU and recommendations were made for the implementation of a cost recovery programme within the unit in which charges would be levied for the issuing of phytosanitary certificates following inspection of agricultural produce.

The PQU convened two meetings during the year between relevant agencies, importers and exporters to clarify issues under the Plant Protection Act, (Chapter 68:03 of the Laws of Guyana), and discuss the Unit's overall role and function. A **National Import Committee** was formed with representatives of the Customs and Excise Division, Guyana Agency for Health, Environment and Food Policy (GAHEFP), the Ministry of Trade, the Food and Drugs Department, the National Bureau of Standards, the Consumers Association and the Ministry of Agriculture. The Committee's formation now ensures that all customs entries are examined and stamped by the relevant regulatory agency before commodities are released to the importer.

Fruit Fly Surveillance

The discovery of a pair of wings of the Carambola Fruit Fly (*Bactocera carambolae*) at Orealla in September 1993 prompted intensification of surveillance activities in communities which border Suriname. Two fruit flies were trapped at Sipauta in February and March and the area was heavily baited to eradicate any new arrivals.

There were no further discoveries up to year end, but surveillance activities have continued with the extensive use of traps. Traps were serviced on a regular basis

Training

The PQU in collaboration with NARI, conducted a one week course for Plant Quarantine officers in March. Resource

personnel was drawn from NARI headed by Dr. Leslie Munroe, entomologist and Senior Research Scientist.

Agriculture Month

Not all of the activities scheduled were held on account of the late procurement of funds but each region was able to bring off at

least 50% of its planned programme. World Food Day was observed at the Sophia Exhibition Site and featured addresses by the Minister of Agriculture and the Food and Agriculture (FAO) Representative. It was accompanied by a two day exhibition which unfortunately excluded livestock due to the lack of suitable accommodation for the animals.

Table 14 : Export by Quantity of Quarantined Commodities

COMMODITIES		DESTINATIONS
Greenheart (sawn)	9,480 bm	St Lucia
Greenheart (pilings)	986 PCS	USA
Greenheart (sleepers)	30 PCS	USA
Lucus lumber	3,652 PCS	Greece
Mixed hard wood (logs)	13,474 PCS	USA, Jamaica, Trinidad
Mixed hard wood (rough)	4,723 PCS	USA, TT, St Vincent
		Columbia, Canada
Mixed hardwood sleepers	46,700 bm	St Lucia, USA, Dominica
Mixed round logs	576 PCS	USA
Mora / Greenheart piles	12,213 PCS	Jamaica, Santa Domingo
Nibi furniture	4,650 PCS	Columbia
Ply wood	131 PCS	Trinidad & Tobago
	107 PCS	Trinidad & Tobago
	14,060,224 Kgs	Venezuela, USA, Mexico, Puerto Rico
Purpleheart/Greenheart	1,652,128 m ²	Italy
Rough Greenheart	3,030 PCS	Canada
Walaba poles	1,381 PCS	USA
Avocadoes	1,016 PCS	Trinidad & Tobago
Awara	5,315 Kg	Canada, Antigua, Barbados
Bilimbi	3,461	Canada
Bon Corilla	821	Canada
Bora	770	Canada
Bread Fruit	46	Canada
Calaloo	22,164	Antigua, USA, Canada
Carambola	3,328	Canada
Cassava	2,993	Canada, Antigua
Cashew	105	Canada
Celery	510	Antigua
Cherries	1,410	Canada
Chichera	5	Canada
Coerai	86	Canada
Coconut	1,889	Canada
Coffee Beans	197	Canada
	1,159	Canada
	33,437	Canada
	4,545	Barbados
	220	St Lucia
Copra	1,529,525	Trinidad & Tobago
Corilla	842	Antigua, Canada
Cucumber	70	Antigua,
Cut Flowers	1,727	German, USA

COMMODITIES	QUANTITIES	DESTINATION
Dry coconuts	13 000	Barbados
Dunks	2,719	Canada
Eddoes	26,654	Antigua, Canada, USA
	1,500	Barbados
Eddoe leaves	6	Canada
Egg plant	30,346	USA, Antigua, Canada
Eschallots	5,320	Barbados, Antigua
Frozen fruit	74	USA
Frozen pain	120	USA, Canada
Genip	22,635	Canada
Ginger	10	Anguilla
Ginger lilly	2,798	Canada
Golden apple	417	Canada
Goose berry	2,336	Barbados
Grape fruit	238	Canada
Guava	1,997	USA, Canada
Hot pepper	254	
Jack fruit	3,278	Canada
Katahar	135	Canada
Kokerit	3,015	Canada
Kowa	88 5	Canada
Lily leaves	46,662	Antigua Barbados
Limes mamey	631	USA, Canada
Mango	30,246	Canada
Mango leaves Medicinal herbs	84	Canada
Mixed Tropical flowers	1,737	Canada, USA
Ochrees	105	Canada, USA
Oranges	6,896	Canada, USA, Antigua
	3,124	Canada
Padi	16	Barbados
Pak choi	12 36 mt	Jamaica
Papaw	10	Canada
Passion fruit	251	Canada Antigua
Pepper	256	Canada Antigua
Pineapple	62,268	Canada, USA
	369,982	Canada, USA, Antigua
Plantain	22,673	Barbados
	242	Trinidad
Plant parts	127	Canada
Poi	6,349	Canada, USA,
Pomegranate	5	Canada
Psyllium	711	Canada
Pumpkin	85,624	Canada, USA
Red Bean	180	Canada

Hinterland Programme

A community forum for hinterland workers was held in Region 9 in November at which problems of a general

nature were discussed and new methods of approach were discussed and adopted in an effort to overcome some of these problems.

This will be an annual affair in order to highlight the Ministry's thrust in these remote areas

Table 15 : Summary of the Hinterland Programme Activities 1994

Activity	Target Set	% Done	Analysis of Successes & Failure
Quarterly Meetings	Four sessions		<p>These sessions examine the state of the extension services in general. The first meeting examined the following areas.</p> <p>Staff : The Regions continue to be depleted of staff and the present situation is as follows.</p> <p>Region #1</p> <ul style="list-style-type: none"> 1 Agric. Officer, 1 Livestock Attendant 1 Nursery Foreman <p>This Region is provided with routine visits, advisory services and the production of fruit plants. The system of warrants & coordinated visits has greatly enhanced the capabilities of the limited staff, as well as inspired the moral and confidence.</p> <p>Region #2</p> <ul style="list-style-type: none"> 1 Agric. Officer 1 Vet Officer 1 Livestock Officer 2 Livestock Assts 2 Agric. Field Assts. 1 Nursery Foreman 4 Laborers <p>Four technical staff resigned and have not since been replaced. This Region is now only capable of monitoring the Amerindian locations, selected coastal areas, and of producing budded plants</p> <p>Region #3</p> <p>One Snr. Ag. Officer. The remaining staff have all left. The Region has virtually lost its programming capacity, maintaining only a nursery.</p>

Activity	Target Set	% Achieved	Analysis of Success/ Failure
Achushi ant	Demos 52 Lectures	90% ^a	This is the most persistent hinterland pest that affects staples such as cassava. The bait has proven most effective.
Crop pests	Lectures 48 Demos 20 Visits 120	100% ^a 80% ^a 90% ^a	There is need to produce organically grown foods to suit tourists' demands
Nursery Monitoring	10,000 plants Repairs 3		Region #1 produced 2,443 plants Region #7 produced 31,35 plants Region #8 distributed 256 Regional centers of 1,7,9 all had some works done Region 1 was most successful, followed by Region 8 Region 9 began in the last quarter
Extension activities	Home visits 2500 Demos 58 Group discussion 10 Farmers meetings 26 Lecture discussion Debates 25 Exhibitions 2	74% ^b 100% ^a 100% ^a 100% ^a 100% ^a 100% ^a	These activities covered a variety of topics including achushi ant control and the methods of propagation used in nurseries. As much as possible, all schools were contacted to ensure some measure of continuity. The staff of these regions face a large number of non routine problems which include inaccessible terrain and unusually harsh weather
Hinterland conference			The gross problems of the hinterland were discussed at a general community forum in reg 9. This region wants to construct a cattle pasture for the cultivation of improved grasses. Sheep and goat rearing is catching on in the region and the road is a boost to production

Coconut Rehabilitation 1994

Operational Areas - Regions 2,3,4,5,6.
Objectives:

(1) To improve production through better field sanitation and plant health.

(2) To advise farmers on the selection of mother palms for improving the genetic potential of these plants.

Table 16 :Summary Coconut Rehabilitation Programme 1994

				Analysis of success and Failures
Region#2*Field day	2		--100%	Two field days were conducted at Queenstown and Grant, Charity in the Pomeroon. These events were centered around the maintenance and rehabilitation of orchards. A total of 142 farmers attended.
*Seminars	2		}	
Region #3				Three seminars were conducted at Leguan, Waakanaam & Parika respectively; the lone field day was held in Leguan. Farmers requested the further staging of the Castnia caterpillar control exercise.
Method Demo	1		}	
*Seminars	3		--100%	
Region #4				The two field days were held at Hope and Boodho's estate, while the lectures and discussion were conducted at Mahaica. Ceiros Wilt and Castnia were targeted for attention.
*Field Day	2			
*Lecture	1			
*Group Discussion	1			
Region #5				The feature event this year was the field trip to NIEOCOL, in which 30 farmers observed the hygienic production and processing of copra and edible oil. The other programmes dealt with pest and disease control.
*Demos				
*Field Trip	2		--100%	
*Seminar	2		--75%	
	1		}	
Region #6				This Region carried out the majority of activities this year because the staff worked closely with pilot farmers.
*Demos				
*Seminars	7		}	
*Field Day	6		--100%	NIEOCOL produced 1,704,549 kgs Copra was obtained from Pomeroon, & Regs 4 & 5.
Crude oil processing	1		}	
				6,945 kgs
Dry Nuts Export				2,211,848 kgs to Trinidad at a price of US\$ 0.14 - 0.16 /lb.
Copra Export				This form of activity was surveyed and it revealed that processing oil was still profitable.
Cottage Industry				

Activities	Target Set	% Achieved	Analysis of success and Failures
Common Factors			<p>The business is still profitable and more persons are becoming involved</p> <p>Production /1000 Nuts *Reg 2 10 Gls *Reg 4 15 Gls *Reg 5 14 Gls</p> <p>Selling Price/Gal *Reg 2 \$450 *Reg 4 \$330 *Reg 5 \$300</p> <p>All sectors requested skills upgrading to face increasing competition</p>

Summary of Other Programmes 1994

Table 17 : Summary Nursery Rehabilitation Programme 1994

Programme/ Activity	Target Set	Achievements	Analysis of Success or Failure
Waimar Nursery	5,000 plants	1,485 = 29.7%	This nursery produced as follows: sour sop - rough lemons - 924, cherries - 50, bread fruit - 28, limes - 71, passion fruit - 330, avocados - 49. Some vegetable seeds were also cultivated.
Barfeca nursery	5,000 plants	3,351 = 66.3%	This nursery produced as follows: 1,053, avocados - 155, cherries - 129, bilimbi - 117, ca-bolas - 179, sugar apples - 91, sour sop - 91.
Hosororo nursery	10,000 plants	5,442 = 55.7%	The production as follows: avocado - 1155, oranges - 960, grapefruit - 100, other citrus - 200, gramoda - 190.
Fort Wellington	500 plants	200 = 40%	This is a holding nursery that has stretched itself into actual production. In addition, it produced fura - 18 lbs, blackeye - 45 lbs and ochros 18 lbs.
Pomchroyne nursery	15,200 plants	7,772 = 51%	This nursery has performed below potential for a number of reasons. Citrus plants produced were actually 42% of the target of 11,000 plants. The mixed fruits produced was 40% of the original target. A total revenue of \$178,650 was realized from 3,573 plants.
Clarity nursery	10,500 plants	8,359 = 80%	The production was as follows: budded citrus - 6,977, root stock - 429, avocados - 450, mixed fruit 500. Fifty % of these plants were sold.

Programme/ Activity	Target Set	Achievements	Analysis of Success or Failure
Mon Repos nursery	10,000 plants	9,849 98%	This is a well run production entity that is constantly on target. Total sales were 81.4% of the production. A volume of \$282,550 was realized.
Timehri nursery	30,000 plants	16,949 57%	This nursery is operating below capacity, for want of repairs to the infrastructure and better production methods. In 1995 it is slated for national attention. The sales volume realized was \$190,000.00.
Benah nursery			Rehabilitation of the bridge, floor, fence and shed was the focus of activity this year. These were not all accomplished. About 3,000 citrus and 200 mixed fruit seedlings were produced.
Extension Activities	15	106%	These activities are of a supporting nature and are geared to provide outreach support. The objectives are to enhance quality by the application of improved standards.
Seminars	7	100%	
Demonstrations	4	75%	
Lecture/ Field Days	5	140%	
TOTAL	31	106%	

Table 18 Summary of Crop Improvement Programme 1994

	Target Set	% Achieved	Analysis of Successes or Failure
Region #2			
Seminars	4	4 = 100%	Approximately 133 farmers attended these activities which were held at Cotton Field, and various other locations. These events were done in collaboration with NARI, Caribbean Chemicals Ltd. and Amazon Chemicals Ltd.
Method De-mos	1	0 = 0%	
Farm Tour	0	overall = 80%	
Region #3	4	6 = 100%	These events attracted a total participation of 80 farmers from Parika, Wakenaam & Leguan; the topics dealt with included vegetable production, basic calibration of spraying equipment, and crop protection methods.
Seminar	2		
Method Demos			
			These two programmes dealt with the topic of production technology and weed control. Assistance was given by NARI on both occasions.

Activities	Target Set	% Achieved	Analysis of Successes or Failure
Region #1 Seminar Method Demos	1 1	2 = 40%	Approximately 151 persons from Overwapt, Cotton Tree, Belladrum & Golden Fleece participated in these field exercise. All of the recommended practices were taught in an informal manner, and they were reinforced by the presence of the reputable chemical companies.
Region #5 Seminar Method Demos	6 2	6 = 100% 1 = 50%	
Region #6 Seminar Method Demos F/om	6 3 0	6 = 100% 3 = 100%	A total attendance of 113 farmers witnessed the demonstration of known recommended practices for vegetable production. Pest management strategies were outlined and on all occasions there was support from other representatives in the sector.

NATIONAL DAIRY DEVELOPMENT PROGRAMME

Objectives

To increase milk production to the level of national self sufficiency through:-

- *the encouragement of improved pastures (individual and communal) and;*
- *the improvement in genetic stock - mainly through artificial insemination.*

During 1994, the following staff changes occurred:

- Three technicians terminated their services, while another was dismissed. One technician was subsequently recruited and deployed in Region 6 (in the Fourth Quarter), while another is undergoing training at Head Office, for deployment in Region 3 early in 1995.
- The services of two part-time technicians were discontinued (1 - Region 3, 1 - Region 6). However, the service of another part-time technician on the West Coast of Demerara, (Region 3) was being utilized. It should be noted that the NDDP uses the part-time services of A.I. Technicians who are either privately engaged or are substantively employed within the Regional Service system.
- The Confidential Secretary to the Programme Director tendered her resignation in the Third Quarter. The incumbent typist was subsequently promoted and a replacement typist was recruited in the fourth quarter.
- An Accounts Clerk, a Driver, an Office Assistant and a Charwoman were all employed in the Fourth Quarter. Both drivers subsequently terminated their employment in the second and fourth quarters, respectively.

It is expected that the staff complement

will increase from its current 25 to 31 with the employment of five A.I. Technicians and one Driver in 1995.

Improved Pasture Development

During the year, monitoring of existing cultivations of improved pastures (both at the individual farmer level and communal plots) was done. Intermittent rain in the First Quarter as well as sustained rain in the third, and for most of the fourth quarter, enhanced forage growth and establishment.

During 1994, a total of seventy-seven and three-quarter acres of improved pasture were established as follows:-

- a) Region 3 - five and one-half acres by three individuals
- b) Region 4 - sixty-five and one-half acres by one hundred and twenty-six individuals
- c) Region 5 - two and one-half acres by three individuals
- d) Region 6 - four and one-quarter acres by seven individuals

A total of seventeen and three-quarter acres were rehabilitated as follows:-

- a) Region 3 - ten acres by the Edinburgh Communal Forage Plot
- b) Region 5 - one acre by one individual
- c) Region 6 - six and three-quarter acres by four individuals

During the first quarter, activities on forage preservation (silage) were conducted in Regions 3 and 5, in collaboration with IICA and CARDI on individual farmsteads. These were used, as demonstration models and involved farmers from the surrounding villages. The Senior Minister of Agriculture declared Silage-making demonstration open.

Artificial Insemination Services

During the year, of 2,367 requests 2,201 services were performed. A total breakdown of requests and services is given in Table 20.

During the year, 395 births were recorded of which 209 were males and 186 females. This figure does not represent all of the births that have taken place as a result of the A.I. Programme. Difficulties are being experienced by the field technicians in collecting the data 9 months after the service has been performed.

The Cattle and Milk Production Survey (CMPS)

The Cattle and Milk Production Survey conducted by the Planning Division of the Ministry of Agriculture was completed in the third quarter. The National Milk Yield stood at 8.75 million gallons with Region 6 being the largest fresh milk producer (3 million gallons) followed by Region 5 (2.7 million gallons). The survey also showed that Region 3 possesses good milk yielding cows with its 14,059 cows producing 1.9 million gallons of milk (an average of 136 gallons/cow/year with only minimal supplementary feeding. Region 4 (169 gallons/cow/year) especially Georgetown (250 gallons/cow/year) and those areas in closer proximity to Georgetown, possess the nation's best dairy stock.

Training/Extension Activities

During 1994, staff met with Regional personnel and farmers and discussed matters pertaining to NDDP's activities in the Regions.

During the year, the following forty activities were highlighted in Regions 2 - 6:

Seminars (13) -

Included are the eleven seminars in Agriculture Month (October)

Refresher Course/Workshop (1) -

Conducted in Artificial Insemination in May at the St. Stanislaus Dairy Training Center. Eighty farmers and 15 A.I. Technicians participated. Resource persons included the Programme Director and visiting representative of Tri-State Breeders of The USA.

Training Courses (6) -

Forty-four farmers were successfully nominated by the NDDP for residential training at the St Stanislaus Dairy Training Center (SSDTC).

Group Discussion/Meeting(9) -These pertain to farmers seeking land for pasturage, particularly in Regions 5 & 6.

Field Days (3) -

All Field Days were conducted at the SSDTC on Improving Milk Quality and Quantity

Video Show (1) -

Two videos - "Heat Detection" and "Sustainable Small Farm Milk Production" were shown.

Method/Result -

Both on silage making at Novar.

Demonstration (2) -

Region 5 and Canal #1, Region 3, respectively.

Exhibitinn (1) -

Participation in World Food Day Exhibition at Sophia in October.

Cattle Farmers Congress(1) -

Held at the Sophia auditorium in September. Over two hundred farmers representing their Cattle Farmer Associations from Region 2-6, attended.

Addresses were delivered by the Hon. Minister of Agriculture and the Programme Director. A communique was issued after farmers discussed/documentated their problems in Plenary Session.

Seven Artificial Insemination Technicians participated in a residential 5-day Training Programme at the SSDTC in February.

Two senior NDDP officers participated in a 2-week workshop on "The use of Sugarcane and other Local Resources as Animal Feeds" held at the Sugarcane Feed Center from 9th - 30th May, in Trinidad. Twenty-three livestock personnel from Belize, Suriname, Barbados, Grenada, St Lucia, St Vincent and the Grenadines, Antigua and the host country shared experiences.

The NDDP's Region #6 representative attended the following :

- a meeting with the RPA, GRBA, NARI, Regional Agricultural Staff and 35 farmers at Whim Community center in June. Constraints to rice production was extensively discussed.
- a group discussion at the Office of the Institute of Private Enterprise Development (IPEED) at Port Mourant in July. The discussion dealt with IPEED's micro-enterprise scheme and the group-of-five concept for small loan disbursements.
- a meeting held with the Black Bush Polder Land Development Council and three ODA consultants at the Guest House at Mibicuri. The aim of the meeting was to enable consultants to familiarise themselves with the physical, economic and other conditions in the BBP.

The Programme Director and cattle farmers of Cotton Tree - Zeezicht participated at a meeting with the MMA/ADA Management Committee in May. The issue of procuring land for a communal pasture, about 685 acres of the right bank of the Abary Creek

and on the eastern side of the Mam Canal, was discussed.

The Director also delivered a lecture on "The Effective Use of Agro-Chemicals in Animals Science" in June, as part of a one-week course organized by TIAT (Training for Improving Agricultural Technology), Faculty of Agriculture, University of Guyana, addressed the Regional Agricultural Council of Region 6 in October; and together with the Senior Minister of Agriculture and the Minister within the Ministry of Agriculture opened a communal forage plot at Enterprise in November.

NDDP also assisted in the development of profiles and management systems for cattle farmers, ranging from 5-cow units to over 200-cow units, and was instrumental in processing loans/aid for individual cattle farmers and farmers groups.

OTHER ACTIVITIES - INTER-AGENCY COLLABORATION, ETC.

During 1994, the National Dairy Development Programme:

- participated in discussions with a number of visiting missions and delegations, among them were the Volunteers in Overseas Co-operative Assistance (VOCA) - USA, Continuing Educational Programme in Agricultural Technology (CEPAT) St Augustine Campus University of the West Indies, The Food and Agricultural Organisation (FAO), United Nations, The Tri-State Breeders - USA, SEMEX Canada, Agricultural Institute of Canada, The International Livestock Management Schools (ILMS) Canada, Flaten and Associates/Canadian Dairy Farmers Association Canada, Cuba, China, Colombia, CARIB, HCA, IEB and UNDP

- Reviewed documents pertaining to animal agriculture relative to potential investment and assisting in the formulation of CARDI's Country (Guyana) Programme for Livestock Research and Development.

- Participated as a member of the Co-ordinating Committee for the Transfer/Validation of Milk Production, under the chairmanship of CARDI. Other members were from the Animal Services Division (Ministry of Agriculture), NARI, HCA, Faculty of Agriculture, University of Guyana. A project proposal for the transfer/implementation/validation of appropriate milk production system on 200 farmsteads in Regions 3, 4 and was submitted to CARDI's Head Office in Trinidad, for approval.

- Collaborated with CARDI in establishing germplasm collection at Canal Polder #1 in Region 3 and Cane Grove in Region 4, with the objective of identifying suitable forages that could be successfully established on pegasse soils.

- Collaborated with HCA/CARDI/AIC (Agricultural Institute of Canada) in establishing pilot farms based on training received at the SSDTC. The Agricultural Institute of Canada provided partial financing while the other three agencies - NDDP, HCA and CARDI provided technical assistance. One farmer in Canal #1 benefitted in 1994 while other farmers of Triumph,

East Coast Demerara, will be assisted in 1995.

Dairy Cow of the month Awards

During the year, twenty-one farmers received the Dairy Cow of the Month Award with individual animals recording dairy milk production of between twenty and thirty-two pints.

A breakdown by Region is given below:

Region 3 - 8, with individual daily milk production of between 21 and 32 pints.

Region 4 - 5, with individual milk production of between 22 and 28 pints.

Region 5 - 7, with individual daily milk production of between 20 and 28 pints.

Region 6 - 1, with a daily milk production of 22 pints.

District Cattle Farmers Association (DCFA)

For 1994, nine DCFAs were established as follows:

Region 2 : 2 - Coffee Grove/Evergreen, Henrietta/Lima

Region 3 : 1 - Hague Settlement

Region 4 : 1 - Craig/Grove

Region 5 : 4 - Cotton Tree/Zeezicht, Blairmont, Bath and Burma

Region 10 : 1 - Linden

At the end of 1994, the total number of District Cattle Farmers Association is 34.

Donations

During 1994, the NDDP, through the efforts of the Programme Director, was able to receive the following:

- In March, 200 doses of Jamaica Hope frozen Semen from ALCAN JAMAICA

- In March, 200 doses of Holstein semen from Suriname

- In May, 3000 doses of Holstein frozen semen through FAO, Rome

- In August, one (1) Honda motorcycle (CG TODAY - 100cc) from the British High Commission.

- In November, 5000 doses of Jersey frozen semen through the Jersey Overseas Aid Committee

Wheat Middling Distribution

During the year there was great fluctuation in wheat flour production. This resulted in varying (usually lower) quantities of wheatbran (WB) available for distribution.

Table 19 : Staffing at 1994-12-31

POSITIONS	ESTABLISHMENT	EMPLOYED	
		JANUARY	DECEMBER
Programme Director	1	1	1
Deputy Programme Director	1	-	-Vacant (1)

POSITIONS	ESTABLISHMENT	EMPLOYED	
Senior Dairy Officer	1	1	1
Dairy Officers	2	-	- Vacant (2)
Senior Dairy Assistants	4	3	1 Vacant (1)
Senior Artificial Insemination Technician	1	1	1
Artificial Insemination Technicians	17	14	12 Vacant (5)
Accountant	1	1	1
Accounts Clerks	2	2	2
Confidential Secretary	1	1	1
Typist	1	1	1
Commodities Procurement Support Officer	1	-	- Vacant (1)
Drivers	2	1	- Vacant (1)
Office Assistant	1	1	1
Charwoman	1	1	1
Total	37	28	25

MAIN ACTIVITIES 1994

Table 20 : NDDP Highlights of Activities/ Programmes 1994

ACTIVITY / PROGRAMME	TARGET SET	TARGET ACHIEVED	PERCENTAGE ACHIEVEMENT
Artificial Insemination	2040	2040	100.0
Pasture Establishment	50 acres	7.175 acres	15.5
Pasture Rehabilitation	30 acres	17.75 acres	59.2
Extension Activities	43	34	79.1
Training:			
a) Technicians	8	7	87.5
b) Farmers	50	44	88.0
Dairy Cow of the Month Award	48	21	47.7
District Cattle Farmers Association	42	34	81.0

Table 21 : NDDP Summary of Artificial Insemination Activities By Region

REGION	AREA	REQUEST (JAN-DEC)	SERVICES (JAN-DEC)
2	Supernaam - Anna Regina	73	71
	Anna Regina - Charity	92	90
	Sub-Total (Region 2)	164	161
3	Maria's Lodge-Anna Catherine (including Canals 1&2)	202	177
	Leonora-Parika	124	115
	Leguan	45	41
	Sub-Total (Region 3)	371	333
4	Georgetown & Environs	274	246
	Lower East Coast Demerara	738	730
	East Bank Demerara	162	147
	Sub-Total (Region 4)	1174	1123
5	Upper East Demerara	162	155
	West Coast Berbice	113	111
	Sub-Total	275	266
6	East Bank Berbice-Rose Hall	241	175
	Rose Hall-Adventure	23	23
	Black Bush Polder	139	113
	Adventure-Crabwood Creek	7	7
	Sub-Total (Region 6)	383	318
	Total (Region 2-6)	2,167	2,201

FISHERIES DEPARTMENT

Mission Statement

To manage, regulate and promote the sustainable development of the nation's fishery resources.

ORGANISATION AND MANAGEMENT

Organization

The organogram overleaf establishes the basic units and organization desired. However, due to the shortage of staff, the organogram was used as a guide, e.g. some personnel had to function in more than one unit.

Description of Units in Organogram

a) Legal and Inspectorate Unit

The legal and Inspectorate Unit is responsible for ensuring the observance of all legal and administrative requirements by all entities in the Fishery Sub-sector and to recommend changes of new regulations when necessary. This Unit liaises closely with the Guyana Defence Force and Police Force, Customs and Excise Department, and Harbor Master's Department at the center and with Regional Fisheries Officers to whom

some of these functions have been delegated.

b) Research and Development Unit

This Unit has four (4) sub-units, namely Statistics, Resource Assessment, Technology and Development and Inland Fisheries and Aquaculture.

- 1) The Statistics Sub-unit, which collects and analyses data and conducts surveys to provide scientific and socio-economic information for policy determination, planning and resource management.
- 2) The Resource Assessment Sub-unit is concerned with conducting stock assessment research and surveys to obtain resource management information.
- 3) The Technology Development Sub-unit, identifies developing or introduces new and appropriate technologies for harvesting and post harvesting (e.g. processing) activities, and
- 4) The Inland Fisheries and Aquaculture Sub-unit which develops and tests the culture systems for local and exotic fish species.

Extension Unit

The Extension Unit is concerned with

the acquisition and dissemination of technical information and inputs within the Sub-sector. It liaises with Regional Units in relation to artisanal fishery and aquaculture development. It passes on technical information and obtains feedback by way of demonstrations, seminars, workshops, field visits and exhibitions.

d) Project Unit

This Unit is responsible for the implementation of the Artisanal Fisheries Infrastructure Project.

e) Clerical and Support Unit

This Unit provides the necessary support services for the Technical Units within the Department.

Staffing

All fisheries staff were returned to central control in 1993. At the end of 1994, only seventeen (17) of the forty-six (46) approved staff positions (Projects Unit's staff not included) were occupied in the following manner: one (1) of three Administrative positions, zero of eight Senior Technical positions, one of seven Other Technical, five of six Clerical and Office Support positions and ten of twenty-two Semi-Skilled Operative and Unskilled positions.

FISHERIES DEPARTMENT

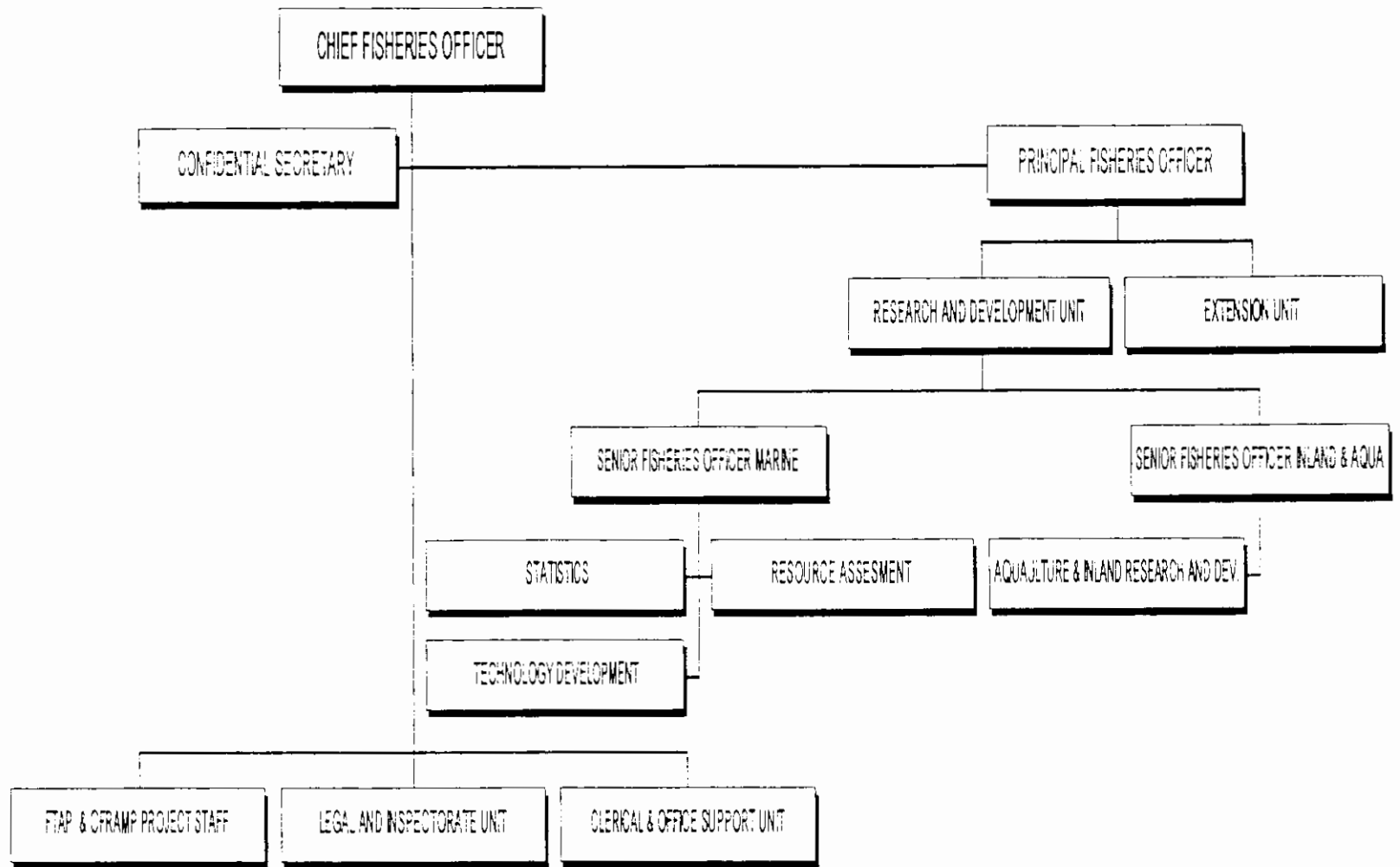


Table 22 : Fisheries Department : Staffing at 1994-12-31

POSITION/CATEGORY	APPROVED POSITION	POSITION FILLED	POSITION VACANT
Chief Fisheries Officer	1	1	0
Principal Fisheries Officer	1	1	0
Administrative Assistant (General)	1	0	1
Senior Fisheries Officer	2	0	2
Fisheries Officer	5	0	5
Master Fisherman	1	0	1
Fisheries Assistant II	5	0	5
Accounts Clerk II	1	1	0
Typist/Clerk II/I	2	2	0
Typist/Clerk III	1	1	0
Driver Mechanic	2	2	0
Fisheries Field Assistant	9	1	8
Fisheries Assistant I	3	0	3
Fisheries Inspector	4	2	2
Data Collector	2	1	1
Fish Station Attendant	4	0	4
Cleaner	1	1	0
TOTAL	46	13	33

Training

Principal Fisheries Officer, and Fisheries Officer (ag) attended a Training Workshop from 13-19 April in Trinidad on Data and Information Systems and Licensing and Registration System

All staff of the Department attended a two day Training Workshop on survey techniques on 26th and 27th July in preparation for executing the Artisanal Frame and Women in Fisheries Surveys.

Overseas Conference/ meetings

The Chief Fisheries Officer participated in the following overseas conferences and meetings during the year:

- CFRAMP's Pelagic and Reef Fisheries Resource Assessment Sub-project Specification

Workshop 18 - 22 January in St Kitts

- Official Visit with Presidential Delegation (Guyana/Surinam Fishing issues). 12 - 16 June Surinam
- CFRAMP's Program Review and Technical Committee Meeting 11 - 13 July Antigua
- Enforcement Re Turtle Excluder Devices on Trawlers 12 - 16 September Panama

Summary of Activities, 1994

Current Programme

Overview

In general, the overall efficiency of the Department in implementing the Current Programme for 1994 was affected by:

- the shortage of skilled staff;
- undertrained staff acting in higher positions;
- indiscipline (late coming, absence without leave, insubordination);
- poor registry services as a result of ineffective supervision and malingering on the job;
- inefficient accounting services, due to the inability of the Department to attract and retain accounting personnel;
- the long period of time it takes to

process vouchers in the Central Accounting Unit;

- the lack of transportation due to inability to attract and retain skilled drivers.

The Draft Fishery Management Plan for Guyana (DMFMP)

The DMFMP was developed based on all available data in 1993. It is a comprehensive document incorporating the scientific analysis of all available data and all management initiatives advocated and/or implemented over the years and charts a course for the management of industrial trawlers and other fisheries.

The limit of one hundred (100) trawlers for prawns and thirty (30) trawlers for seabob was reconfirmed in that document.

Data now being compiled, strongly suggest that the 100 vessel limit for prawns is much too high in the light of continued poaching by foreign trawlers and local seabob vessels switching without permission to catch prawns.

Most of the management initiatives have been discussed with the industry but the Department has also proposed a formal process for the acceptance of the DMFMP by the Ministry.

The document is to be dynamic and should be adjusted as more data become available. Against this background, the Fishing Register is being examined.

Management should be a cooperative process involving the people of the industry and the regulatory body.

Table 23 : Fisheries Department : Summary Unit/ Sub Unit Report 1994

UNIT/SUB-UNIT PROJECT	ACTIVITY	TARGET ACHIEVED	ANALYSIS OF SUCCESS/FAILURE
Legal and Inspectorate Unit			
1 Registration, inspection and licensing of Fishing Vessels.	To inspect, register and license artisanal vessels	50%	Out of an estimated 1300 artisanal vessels 317 were licensed and 145 new fishing vessels were registered. See tables 28 & 29.
	To collect license and registration data from the Regional Fisheries Units (RFUs) in Regions 2, 3 and 6 and Central Accounting Unit at Ministry of Agriculture		License and registration data was collected from the RFUs of Region 2, 3, 6 and the CAU, Ministry of Agriculture The Register for Artisanal Fishery Vessels was not updated as the State Auditors based at the Ministry of Agriculture had said that the DOF should no longer use the Register as it was outdated and lacked all the necessary columns, eg. no column for initial of supervisor. Department of Fisheries had discussions with Auditor General. A format was agreed upon which would be produced from a computer software to be used by DOF.
Legal and Inspectorate Unit			

UNIT/SUB-UNIT PROJECT	ACTIVITY	TARGET ACHIEVED	ANALYSIS OF SUCCESS/FAILURE
2. Licensing of Fish Processing Plants	To inspect and license trawlers and update register	74	Out of 114 vessels (59 foreign and 55 local, 82 were licensed, 27 were not in operation (A - vindex 6)
	To renew licenses for Processing Plants after they have satisfied their annual relicensing conditions	100	8 plants had their licenses renewed
	To assess any new applications for Processing Plant licenses		4 applications to operate Fish Processing Plants were received. Only one of these was approved for licensing as the others did not have all the supporting documents, eg. Land Use Permit from the Central Housing and Planning Authority
3. Monitoring compliance with license conditions by Industrial Fleet	To monitor log sheet and monthly production submission		All log sheet and production summaries received were placed in individual company files by vessel. Defaulters were informed. There were improvements in the problem of late submissions due to the fact that some companies waited until the next year to bring in logs and production summaries in order to satisfy one of the licensing conditions. This also brings into question the accuracy of the data.
	To monitor by-catch landings by prawns trawlers.		By-catch submissions were recorded by companies and vessels. One of the problems experienced was late submission due to the fact that some companies waited until the next year to bring in by-catch data in order to satisfy one of the licensing conditions
	To carry out visits to wharves to monitor fleet operations and collate data with Coast Guard		On average visits were made to the wharves once per week and the "Wharf Ledger" was written up.
4. Complaints and Disputes	To monitor complaints and disputes from Center and Region	100%	All reported complaints and disputes from the Center and Regions were recorded
	To bring parties together with a view to settling the disputes		Out of 54 reported incidents 39 were settled In cases where the parties could not arrive at a settlement the complainant was advised to seek legal advice. See Appendix 7.
5. Issuing of Export Applications for Fish and Fish Products	To process export applications and issue general/annual or special shipment licenses		933 special shipment licenses were issued for exportation of products such as frozen fish, frozen shrimp, salted fish, dried shrimp, fish glue, bladder etc. The major shrimp and fish processing plants were issued a total of 8 annual licenses for fish and shrimp separately.

	To prepare monthly reports from applications processed and Customs and excise Department records for the Permanent Secretary, Ministry of Agriculture and the Governor, Bank of Guyana		4 monthly reports were prepared and sent out
6 - Aquarium Export Trade	To renew licenses for Aquarium Fish Exporters To monitor exports of aquarium fish		561 special shipment licenses were issued to the 4 authorised exporters Copies of the invoices on aquarium fish exported were obtained from the Wild Life Unit and the data compiled on a monthly basis. See Appendix 3
7 - Updating department of Fisheries information on existing fishery agreements	To update on a bimonthly basis the Department of Fisheries information on existing fishing agreements such as the leases of the trawlers, "Blue Fin" and "Pirai", the leases of the Artisanal Fisheries infrastructure Complexes and the divestment of CFI	44%	Two (2) reports were completed in 1994. Information on GFL lease to MIPF could not be obtained on a regular basis. One vessel was docked at GFL Wharf and the lease despite several letters and phone calls did not respond
Extension Unit			
Advising on and monitoring the implementation of the Programmes of Work of the Regional Fisheries Units (2 & 6)	To collect and review Programmes of Work from each Unit	100%	Programmes of Work were received from the Units in Regions 2 and 6. The Programmes were reviewed and comments provided

UNIT/SUB-UNIT PROJECT	ACTIVITY	TARGET ACHIEVED	ANALYSIS OF SUCCESS/FAILURE
Advising on and monitoring the implementation of the Programmes of Work of the Regional Fisheries Units (2 & 6)	To liaise with each Unit by way of phone, field visits and monthly reports on the implementation of the Programmes		The PEO and CEO kept in touch by way of phone with the Officers in Region 2 and 6. Programme activities were reviewed and the Officers were encouraged to attend meetings with fishermen etc. The Region 4 office is based at the DCF. Monthly reports on programme activities were submitted by the Officers in Region 2 and 6. The implementation of Regional Programmes were severely affected by the lack of funds, transportation and adequate human resources
9 - Fisheries Extension with Fishermen's Cooperatives	Management and operations of the Artisanal Fishery Infrastructure Complexes at #66, #43, Rosignol, Meadows bank, Parika and Lima Data Collections Fisheries Regulation		Liaison was achieved by the following means - Attendance at the Annual General Meetings, Special General Meetings, Committee Meetings and Management Meetings by senior staff from the Department and staff from the REUs
10 - Artisanal Fisheries Advisory Committee	To convene and chair on the second Fridays of each month the Artisanal Fisheries Advisory Committee which deals with the GOG/CFDA - AFI and FEF Projects and other matters relating to the Artisanal Fishery	45%	Liaison was achieved by the following - Attendance at the Annual General Meetings, Special General Meetings, Committee Meetings and Management Meetings by senior staff from the Department and staff from the REUs

UNIT/SUB-UNIT PROJECT		TARGET ACHIEVED	ANALYSIS OF SUCCESS/FAILURE
11. Commemoration of Fisherman's Day June 29, 1994	To arrange activities to commemorate Fisherman's Day	30%	<p>Cooperative Societies arranged activities at Lima and Parika</p> <p>A seminar on cooperative management was held at the Lima AFI Complex for the members of E/PFCSL.</p> <p>Also, a domino competition was held</p>
12. Projections 1994	<p>To review 1993 production and exports for fish and shrimp (marine, inland and aquaculture) and make projections for 1994</p> <p>To review production and exports for the first half of 1994 and revise the annual projections, if necessary</p>		<p>A review of the 1993 production and exports was done</p> <p>No mid-year review was done</p>
<p>Research and Development Unit Statistics Sub-Unit</p>			
13. Monitoring Production and Exports for the Marine Fishery	<p>To collect data on fish and shrimp production and exports from the processing companies and trawler companies by way of log sheet submissions, production summaries and export invoices and applications, etc, on a monthly basis</p> <p>To summarise data collected by month, quarter, half year and whole year</p>	60%	<p>The data was collected but submissions were late in coming despite oral and written reminders</p> <p>Production and export data were summarised for only ten months of the year. Quarterly reports were only prepared for the first and second quarters. This was partly due to the delay in data submissions mainly by the trawler companies as well as the fact that data collected from other agencies e.g Customs are not always complete.</p> <p>Submissions were made to the Statistical Bureau</p> <p>Information was submitted to various upon request</p>
14. Marketing Price Survey	<p>To collect ex-vessel, wholesale and retail prices from the Greater Georgetown Fisherman's Cooperative Society Inshore Fish Port Complex, processing plants, municipal markets and fish outlets in Georgetown and landing sites, markets, etc, in Regions 2, 4 and 6.</p> <p>To summarise data collected by week, month, quarter etc.</p>	65%	<p>Data was collected from the GGFCSI - IFC, most processing plants, municipal markets and outlets in Georgetown. Some data was submitted by the RFTs in Region 2 and 6. Regional reports were affected by shortage of funds and delays in the processing of subsistence claims</p> <p>Wholesale and retail summaries were prepared by week, month etc</p> <p>Weekly submissions on retail market prices for Georgetown were made to GMC</p>

15. D.O. WSE, UG - Women in the Fisheries Sub-Sector Census	To complete survey process started in 1991	80%	The Survey was completed under the FIAP Project with Department of Fisheries Staff and W.M. of UG Analysis is to be done.
Research and Development Unit Statistics Sub-Unit			
16. Artisanal Frame Survey	To revise and prepare field forms for storage and analysis by computer	20%	The field form was reviewed and revised and made computer compatible for easy analysis with assistance from the Statistical Bureau
	To conduct survey in Regions 1, 2, 3, 4, 5 and 6		The survey was done under FIAP using Department of Fisheries Staff with assistance from Statistical Bureau
	To analyse data and prepare report		The Analysis is yet to be done
Inland Fisheries and Aquaculture Sub-Unit			
Due to the absence of trained staff in these areas very little work was done by this Sub-Unit. Although some advice was given when requested by the fish farmers and potential fish farmers			

Capital Programme

Artisanal Fisheries Infrastructure Project (AFIP)

Construction phase of this GOG/GOC Project lasted from April, 1986 to 1993 and the Coordinating Unit established by the Ministry of Agriculture for overseeing the project was closed in August, 1993. The Fisheries Department, jointly with CIDA, assumed the responsibility for ensuring that outstanding project issues were finalised and the operations of the facility monitored, in relation to the project goals.

Activities in 1994 were:-

- remedial works at Charity and monitoring of settling
- final payment to Morawhanna contractor
- disposal of assets from construction
- maintaining equipment and security at the non-operational complexes
- initial action to have all complexes operational

Financial situation for 1994:-

Income up to 94-12-31 stood at J.383,015.25, and expenditure up to 94-12-31 was 5,226,322.44

Fisheries Equipment Facility (FEF)

During 1994, the activities of this project focussed on the sale of inboard engines and of spare parts for both inboard and outboard engines.

Caricom Fisheries Resources Assessment and Management Programme

The Programme is principally designed to target management institutions of the CARICOM region such as national fisheries divisions and regional research and management institutions (CARICOM Secretariat, the University of the West Indies and the Organisation of Eastern Caribbean States (OECS)).

Primary beneficiaries of the programme are fishing communities of CARICOM, which will obtain maximal long term benefits from

resources through improved resource management. National economies of CARICOM Member States are expected to benefit from related improvements in socio-economic conditions in fishing communities from the stability in the supply of fish to local consumers and the tourist industry, from products. Countries and territories participating in the projects are Belize, Antigua and Barbuda, St Kitts and Nevis, Montserrat, Dominica, St Vincent and the Grenadines, St Lucia, Grenada, Barbados, Trinidad and Tobago and Guyana.

The Programme is funded by CIDA in response to a request from CARICOM Member States through the CARICOM Secretariat (CARISEC). The Standing Committee of Ministers of Agriculture (SCMA) of CARICOM, which is responsible for the management and development of fisheries within the region is the regional body overseeing the Programme and will ensure that it contributes to the region's fisheries development objectives. CARISEC will act on behalf of the SCMA to provide ongoing coordination of programme activities and

administration of Member States' contributions to the Programme. Individual CARICOM Member States will contribute resources to the Programme (funds, staff and in-kind) and will implement Programme recommendations regarding national fisheries management

Goal To promote the management and conservation of fishery resources in CARICOM countries and to permit the exploitation of these the basis of sustainable yield

Purpose To enhance the basic information and institutional capacity necessary to manage and develop fishery resources in the CARICOM region

The Programme will:-

- 1) Strengthen fisheries management structure and improve management capabilities and technical expertise within CARICOM through training and advisory assistance
- 2) Provide information on fishery resource abundance and availability for management purposes within CARICOM
- 3) Define and establish a suitable regional fisheries management advisory mechanism.

Projects

- (a) **Fishery Management Systems (National)**
Activities designed to provide strengthened fishery management capabilities in the region (apart from resource assessment)
- (b) **Training**
Activities designed to strengthen human resources involved in fishery management in participating territories
- (c) **Resource Assessment (Fisheries**

Management Information

Activities designed to provide improved / expanded data and information for developing management advice related to the major fishery resource in the Caribbean

In January, the Large Pelagic Reef and Deep Slope Fisheries Assessment Sub-projects Specification Workshop was held in St Kitts and Nevis to agree on assessment activities. Guyana participated in this Workshop

In July, Guyana participated in the Technical Committee (TC) and Programme review Committee (PRC) meetings which were held in Antigua and Barbuda. The PRC approved an amended Management Plan for the project and the restructuring of the Technical Committee. The role of CARICOM staff and Canadian staff was redefined and a co-management approach was adopted. By the end of the year, the co-management approach was being questioned by the CARICOM staff. In November, the CRFAMP Data manager and a Fisheries Management Expert visited Guyana and conducted working sessions with the Fisheries department on the proposed Data Collection Programme and Fisheries management issues. The Chief Fisheries Officer arranged a meeting between the consultants of the two (2) projects (CFRAMP and FTAP) in order to coordinate approaches so to minimize overlap

The Resource Assessment Unit (RAU) for Shrimp and Groundfish was established on the 1st November, in Trinidad and Tobago. The Principal Fisheries Officer of Guyana accepted the job as Biologist to that RAU.
Fisheries Technical Assistance Project (FTAP)

Project Description

The Canadian International Development

Agency (CIDA) is to provide a number of experts and part time consultants through its Canadian Executing Agency (CEA), to work along with Guyanese counterparts, and to train them in the areas of fisheries economic, socio-economics and marketing as they relate to fisheries data systems along with other identified areas.

Using the "Draft Fishery Management and Development Plan 1989" and the "1993 Situation Paper on the Fisheries Sub-Sector of Guyana" as base documents, the team of experts would

prepare a Fisheries Background Report

prepare a Fisheries Management and Development Plan

formulate Development Investment Projects

In addition, equipment (e.g hardware and software) to support the establishment and continuation of the fisheries data system will be supplied Project Purpose

To develop management capabilities and to map out a strategy for sustainable development in the Fishery Sub-sector.

Implementing Agency

The Project is being implemented by the Department of Fisheries, Ministry of Agriculture.

Beneficiaries

The main beneficiaries are the Department of Fisheries, Ministry of Agriculture and the Fishing Industry.

Project Funding

The total funding is equivalent to C\$1.0 million (specific) and G\$0.5 million (local).

Project Life

The Project will run for one (1) year (1993/1994). It commenced in the last quarter of 1993.

Project Inputs

The Project inputs will take the form of five full time consultants (and some short term consultants) as set out below:

- (a) One (1) Fishery Economist
 - (b) One (1) Socio-Economist
 - (c) One (1) Marketing Specialist
 - (d) One (1) Fisheries Data Systems Specialist (Biologist)
 - (e) One (1) Fisheries Extension Specialist
 - (f) Short term consultant (as requested)
- Activities in 1994

The Fisheries Technical Assistance Project (FTAP) commenced in February, 1994 and was still in progress at the end of the year.

The Principal Fisheries Officer, visited with the CEA and CIDA in Ottawa for a briefing on the project. He carried existing fisheries data and documents requested by the consultants, these copies were left with the consultants.

The Canadian Executing Agency of the Project (CEA) established an office in the building housing the Department of Fisheries (DOF). This office was equipped with computers, a photocopying machine and a fax machine. A modern switchboard which facilitated the installation of several new telephones in the DOF office was also purchased. A generator was purchased and installed so that the Department of Fisheries and the Project Office would not be adversely affected by power outages. The project has financed extensive computer training of all DOF staff who are required to use the computers acquired under the project. The Department's work has also been significantly enhanced by the availability of the photocopy machine.

The Inception Mission of the project was held during the period January 21 to

February 3, 1994 and the Inception Report was prepared for submission to the Government of Guyana (GOG) one month later. This document was regarded as the working document of the project, governing the project implementation, subject to periodic review. The purpose of the Mission was to confirm the understanding between the Department of Fisheries (representing GOG) and CIDA (representing the Government of Canada) on the following aspects of FTAP:

- 1) overall concept
 - 2) methods
 - 3) schedule for achieving goals and objective
 - 4) resource required
 - 5) work plan
 - 6) means of managing and evaluating achievement of projects goals and objectives
- The Mission also identified and met with key agencies which were expected to have an input into the project

During the inception mission, tentative deadlines were set for submission of the three technical reports to CIDA and GOG as follows;

Fisheries Background Report -
May 31, 1994

Sector Development Plan -
September 15, 1994

Investment Projects Report -
December 15, 1994

Throughout the period February 28 to November 26th, 1994 the CEA fielded experts in the various fisheries sub-sectors to Guyana in order to consult with their counterparts in the DOF and garner relevant information for completion of the Fisheries Background Report (FBR) and National Fisheries Management and Development Plan (NFMMP). These sector experts made field trips and undertook data collection and interviews with resource persons relevant to the sections of the Plan they were

responsible for preparing.

The Chief Fisheries Officer and principal Fisheries Officer attended a workshop in Canada held by the CEA in July, 1994 to finalise the FBR.

The FBR and condensed FBR were completed and submitted to the Government in November, 1994.

During 1994, the CEA and DOF held several workshops with Government officials and representatives of various sub-sectors of the industry. These workshops focussed on the training needs of the industry, the issues and concerns of the participants of the industry sensitization of key Government officials and decision makers. The final workshop held in November with key Government officials and representatives of the industry discussed results of the FBR and inputs to the NFMMP.

A tripartite meeting to review progress of the project was held on November 17, 1994 and dates for submission of the remaining technical reports were revised. It was noted that all the counterparts originally identified to participate in the project were no longer available for various reasons.

Other activities undertaken under the project included the following:

- a) artisanal frame survey
- b) women in fisheries survey
- c) aerial survey of artisanal vessels
- d) marketing survey
- e) survey to determine physical status of rural markets particularly in relation to the environment for female fish vendors.
- f) complete repair and refurbishment of two (2) DOF vehicles.

At the end of 1994, work was still in progress on the NFMMP including preparation of a list of investment projects. The projects were formally extended to the end of April, 1995 as it was anticipated that the Plan and detailed list of investment

projects would be completed and aid made available to the Government by that time

Overview of developments in Fisheries

Production and exports

Prawns production for 1994 increased by 3.8% over 1993 levels, with the number of trips for trawlers being the same, hence catch per trip increased. Operators reported an increased abundance of juvenile and small shrimp confirming an improved level of recruitment over 1993, the cause of which could be environmental changes or increase in the spawning stock. The other variable such as over the side sales, poaching by foreign trawlers and improved data collection are assumed to have remained at the 1993 levels. Analysis of plant data would give better indications. However, this trend hopefully will continue thus giving justification for limiting the fleet size. Seabob and white belly production continued to rise. The artisanal fleet grew by two percent and contributed that similar increase in production. The industrial fleet appeared to have endured fewer breakdowns and fished more consistently during 1994 than 1993. The twenty percent rise in seabob and whitebelly production could therefore be attributed to increased fishing effort rather than an increase in the abundance of the resources.

In terms of seasonality, prawns production for the two years was identical. For the period July to November production was comparatively high while for December to June production levels were lower. July and October were the peak months and March and December the lowest months. Seabob production was less defined though for both years, July/August was the peak period. Fin-fish production generally was also high during June to October. Grey Snapper

production was highest in June for 1993 and July 1994, Red Snapper was highest in June 1993 and October 1994 and Gilbacker breaking the pattern was at it's highest in March of both years.

Artisanal fin fish production continued to grow despite complaints by drift seine fishermen that they have to spend longer periods at sea, use longer nets and fish farther shore to maintain their catch. Shark production in particular has been increasing and as a result (because of where they fish for shark) there are increased landings of cabio, mackerel and bonito.

The demand for ice by artisanal boats and sea-bob trawlers throughout the year was not adequately met by Georgetown sources.

Exports of fish and fish products had mixed performance in 1994 compared to 1993. Frozen/ fresh fin fish increased by 13.9%, salted fish by 25%, shark fin by 39.1%, seabob and whitebelly by 15%, while exports for prawns, dried shrimp, fish glue and crab meat fell by 9, 58, 48.2 and 13.8 percent respectively. Since the landings of raw product increased, it is reasonable to assume that in the case of prawns, dried shrimp and crabmeat more of the product was consumed locally while some exports of fish glue was not captured in official statistics.

The level of export could have been affected by the Department's management position of only permitting products from licensed processing and storage facilities in order to enforce quality assurance demanded by the importing countries.

20% of the invoice value was deducted by the Ministry of Agriculture as Wild Life Levy while 5% of their voice value was deducted as export levy by the Customs and Excise Department. Licensing of Vessels

The number of artisanal vessels that were licensed in 1994 was 18.5% less than 1993 and 45.9% less than 1992. Comparatively

the number of licensed fishermen in 1994 increased by 21.4% and 330.5% over 1993 and 1992 respectively. Similarly, the number of fish pen permits in 1994 increased by 38.6% over 1993 and 1992 respectively.

The poor performance of license sales was due to the lack of staff for extension and enforcement and equipment within the Department of Fisheries and similar problems within the Guyana Coast Guard and the Maritime Police.

The Department continued monitoring reported incidences of seizures of fishing vessels for allegedly fishing in the waters of Venezuela and Suriname. One such incident involved an artisanal vessel being picked up by Venezuelan patrols. The vessel was fined, its catch confiscated and the boat released after the fine was paid.

Eight other vessels were detained on five occasions by Surinamese patrols in the Corentyne River. Fines were levied, the catches seized and the vessels released. Delegations from the Upper Corentyne Fishermen's Cooperative Society made representations to the Ministers of Foreign Affairs and Agriculture on some of these occasions.

The Department informed the Ministry of Foreign Affairs (seeking whatever assistance could be rendered), and the Coast Guard.

The Guyana Coast Guard detained one Venezuelan vessel which was fishing in Guyana's Fishery Zone, fines were levied and the catch seized.

Management of the Industrial Fishing Fleet

The industrial fishing fleet of trawlers catch mainly prawns or seabob with fin fish as a by catch. Within the last two (2) decades, there has been a continuous decrease in the amount of prawns landed, believed to be as a result of overfishing, over the side sales at

sea and illegal fishing by foreign trawlers

In an effort to address this problem, the Fisheries Department acknowledges the need for regional management since the resource is shared by the countries on the Guiana-Brazil shelf. As a result the following were among a recommendations made:

- i) limited entry to prawns fishing
- ii) closure of the shrimping grounds from 1st November to 31st January
- iii) prohibiting trawling for prawns from 18 fathoms shoreward
- iv) controlling the number of shrimp processing plant being established etc.

To address over-the-side sales of prawns, the Department recommended

- i) laws prohibiting transshipment at sea
- ii) refusing to grant export licenses for unprocessed prawns and prawns not obtained from an authorised dealer. Despite the implementation of some of the above, the prawns industry stands overcapitalized with all plants operating well below capacity and trawlers were being switched to fish for seabob or to conduct other activities.

The industry saw a significant change, more trawlers became locally owned, seabob

processing plants were established and more locally owned trawlers started fishing for seabob. The dramatic rise in landings of seabob justified concern and fears that this resource could be overfished and the seabob fishery could experience problems similar to that of the prawns fishery. The Department then recommended

- i) demarcating the industrial fleet in terms of their operations (prawns, seabob/fin fish)
- ii) establishing limited entry for seabob, etc

Fishing Register (Industrial Trawling Fleet)

The Fishing Register of the industrial trawling fleet contains one hundred and seventeen (117) traditional trawlers and six (6) small stern trawlers (the classification is in Table 28)

As regards management, the following should be noted

- i) The number of prawns trawlers are significantly lower than the number (100) specified in the management plan. However, despite the low number the resource remains threatened, thus demanding the further reduction in the limit set, and the introduction of other initiatives. The number of trawlers existing in this fishery at present should not be

increased

- ii) The number of seabob/fin fish trawlers in operation stands at twenty-one (21), nine less than recommended. However Noble House Seafoods have purchased the ten (10) Guiana/Alba trawlers and will be putting them in operation. Four of these trawlers which were not operated in 1994, have commenced operating, since paying for their licenses
- iii) Guianese have both the skill and capital to fully exploit both the prawn and seabob fishery. No further foreign trawlers should be permitted to operate and reducing the foreign fleet is a pending issue.

At the end of 1994, the level of license fees unpaid stood at \$3.0m, as compared to \$3.6m in 1993

Fishing Disputes, 1994

In 1994, the number of disputes on the fishing grounds in both categories above increased over 200%. Gillnet versus caddell fishing increased as did trawlers versus gillnet and competition for Chinese seine fish pen

The Department continues to seek solution and notes that lighting (marking of gear) and zoning of fishing areas may be the solution

Table 24 : Expenditure on CFRAMP for Guyana

	CANADA	GOG	TOTAL (MGS)
Project Budget	168.00	12.0	180.0
1994 Expenditure		2.0	12.6
Expenditure to date	28.5	2.5	31.0
Budgeted Funds remaining	139.5	9.5	149.0
1995 Estimate	25.0	2.0	27.0

Table 25 : Expenditure on FTAP

	CANADA	G	TOTAL (MGS)
Project Budget	99.2	3.84	103.04
1994 Expenditure	43.5	1.2	44.7
Expenditure to date	49.74	1.7	51.44
Funds remaining	49.46	2.14	51.60
1995 Estimate	20.0	1.3	21.3

Table 26 : Fisheries Sub-Sector Production (mt) 1993 and 1994

ITEM	1993	1994
Prawns (Lard Weight)	1,820.51	1,889.72
Seahob and Whitebelly (Unprocessed Weight)(Processed Weight)	5,614.11 1,640.01	6,736.93 1,968.01
Fin - Fish Industrial	1,333.11	1,588.66
Fin - Fish Artisanal	35,817.96	36,533.00
Fin - Fish (Inland) Including Aquaculture	800.00	800.00

Table 27 Fisheries Sub-Sector Exports (mt) 1993 and 1994

Prawns	1,630	1,482.72
Seafood and Whitebelly	1,215	1,397.52
Dried Shrimp	24	10.07
Fin-Fish (Frozen)	2,720	2,922.46
Fin-Fish (fresh)		176.79
Salted Fish	261	326.16
Frozen Crab Meat	11	9.48
Dried Shark Fins	23	32.00
Dried Fish Gilue	53	27.48

Table 28 : Aquarium Fish Export Trade Information 1993 and 1994

MONTH	NUMBER OF FISH (1993)	NUMBER OF BOXES (1993)	TOTAL INVOICE VALUE - G\$ (1993)	NUMBER OF FISH (1994)	NUMBER OF BOXES (1994)	TOTAL INVOICE VALUE - G\$ (1994)
January	291,065	1,655	2,177,572.00	423,026		3,794,400.00
February	230,625	1,245	1,607,916.50	197,464		3,722,923.00
March	240,558	1,351	1,811,757.00	833,649		5,245,695.00
April	299,040	2,212	2,696,840.00	635,345		3,012,471.00
May	272,760	1,695	1,749,617.00	506,509	2,360	3,256,260.00
June	228,887	1,199	1,713,285.00	201,970	1,075	1,512,525.00
July	157,658	1,150	1,521,990.00	104,260		605,010.00
August	240,408	1,400	918,057.00	384,889		2,989,875.00
September	443,148	2,490	3,307,600.00	518,014		4,219,593.00
October	337,206	2,332	3,123,981.00	558,080		3,320,520.00
November	351,760	2,126	2,911,285.00	517,893		3,123,540.00
December	160,465	1,059	1,401,057.00	497,076		3,167,157.00
TOTAL	3,294,080	19,914	24,510,957.50	5,678,275		37,879,968.00

Table 29 : Issue of Artisanal Fisheries Licences by Regions for 1993 and 1994

REGION #	REGISTRATION		FISHING VESSELS LICENSE		WORKERS LICENSE		FISH PEN PERMITS	
	1993	1994	1993	1994	1993	1994	1993	1994
2	0	13	39	24	27	16		
3	10	10	28	50	65	122	12	21
4	75	85	205	145	847	955	20	20
	29	7	126	44	72	46	24	25
6		30		54		88		12
TOTAL	144	145	398	317	1,011	1,227	57	79

Table 30 : Total Issue of Artisanal Fisheries licenses (1992 - 1994)

	REGISTRATION	FISHING VESSELS LICENSE	WORKERS LICENSE	FISH PEN PERMITS
	294	586	285	12
1993	114		1,011	57
1994	145	317	1,227	
Average Estimated # to be licensed	100	1,150	3,500	

Table 31 : Status of Industrial Fisheries Fleet

CATEGORY	TOTAL	# OPERATIONAL	LICENSED
I) Prawns Trawlers			
Forei Owned			60
Locally Owned	15	7	7
II) Seabob Trawlers			
All Locall Owned	42	21	
III) Stern Trawlers	6	0	0

(Total Number of trawlers {117} + 6 Stern trawlers)

Table 32 : Fishing Disputes - Artisanal vs. Industrial

REGION #	T	SOLVED	UNSOLVED
2			
4	23	15	8
			-
TOTAL			10

Table 33 : Fishing Disputes - Artisanal vs. Artisanal

REGIONS #	TOTAL	SOLVED	UNSOLVED
		2	-
		4	
4	14	9	
	7	7	
6		2	
TOTAL	29	24	

HYDRAULICS DEPARTMENT

The mission of the Hydraulics Department is to investigate, plan, design construct and monitor the operation and maintenance of drainage and sea and river defence works.

Functions

- 1) to act as executing agency for all capital works for sea defenses, river defenses and drainage and irrigation;
- 2) to formulate short, medium and long-term programmes for sea defense and drainage and irrigation works;
- 3) to provide technical assistance in the inspection and design of all hydraulic work being executed by the regional administrations and to monitor the supervision of the works;
- 4) to provide technical information to international financing agencies with respect to the formulation and preparation of projects; and
- 5) to advise Government on all issues relating to irrigation, drainage and sea defenses

Staffing

The Department, which is headed by the Chief Hydraulics Officer, performs most of its work through capital projects. The Project Unit is headed by the Deputy CHO and supervises the following projects

- 1) Black Bush Polder Rehabilitation

- Project
- 2) Drainage & Irrigation Rehabilitation Project
- 3) East Bank Berhice Agricultural Development Project
- 4) Infrastructure rehabilitation Project
- 5) Sea Defence Rehabilitation Project

In addition, three Assistant CHO's are in charge of Investigation, Design & Training, Operations & Maintenance, and Construction

During the year, a number of technical staff left the Department by way of resignation or completion of contracts. At the end of 1994, the staffing position of the Department is shown at Table 34

Rehabilitation of Drainage and Irrigation Infrastructure Programme

The Rehabilitation of Drainage and Irrigation Infrastructure Unit of the Ministry of Agriculture Hydraulics Division commenced with the programme to complete a number of projects associated with the Rehabilitation of Drainage and Irrigation Infrastructure within Regions 2, 3, 4, 6, 7 and 10

The Description and status of the individual projects up to the end of 1994 are shown in Table 35. The Department also undertook works of an emergency nature. These works together

with their status at the end of

1994 are shown in Table 36.

The Department completed approximately 62% of its original planned programme for the year 1994. However, all of the remaining projects with the exception of two have been awarded to contractors and should be completed within the first half of 1995. In the case of emergency works, the Department completed 77% of the projects undertaken while it is expected that the remaining projects would be completed within the first quarter of 1995.

Some of the major problems the Department experienced during 1994 were:-

- 1) Inadequate staffing - A number of vacant positions have not been filled in the Department, especially, in the technical field.
- 2) Inadequate Supervision of contracts executed by the contractors. This is due mainly to a shortage of, and inadequately experienced, personnel
- 3) Poor quality of works by some contractors.

It is envisaged, that with the proposed inauguration of a Project Execution Unit, the performance of the Department would be enhanced, since the department would then be equipped with the necessary Technical and Support Staff to complete and execute projects in an efficient manner

Table 34 : Staffing at 1994 - 12- 31

POSITION	NUMBER OF POSITIONS	POSITION FILLED	VACANCIES
Hydraulics Officer		0	
Deputy Chief Hydraulics Officer			
Administrative Assistant		0	
Store-Keeper III			0
Confidential Secretary		0	
Accounts Clerk III			
Typist Clerk III			
Driver/Mechanic			
Accounts Clerk II			0
Vehicle Driver	3	0	
Typist Clerk II/I	3		
Office Assistant		2	
Handyman		0	
Assistant Chief Hydraulics Officer	3	2	
Draughtsman			
Senior Assistant Draughtsman			
Hydraulics Technical Assistant			0
Assistant Draughtsman	2	2	0
Mechanical Engineer	2	0	
Typist Clerk II/I			0
	2		
Typist Clerk			0
TOTAL	36	15	21

HYDRAULICS DEPARTMENT

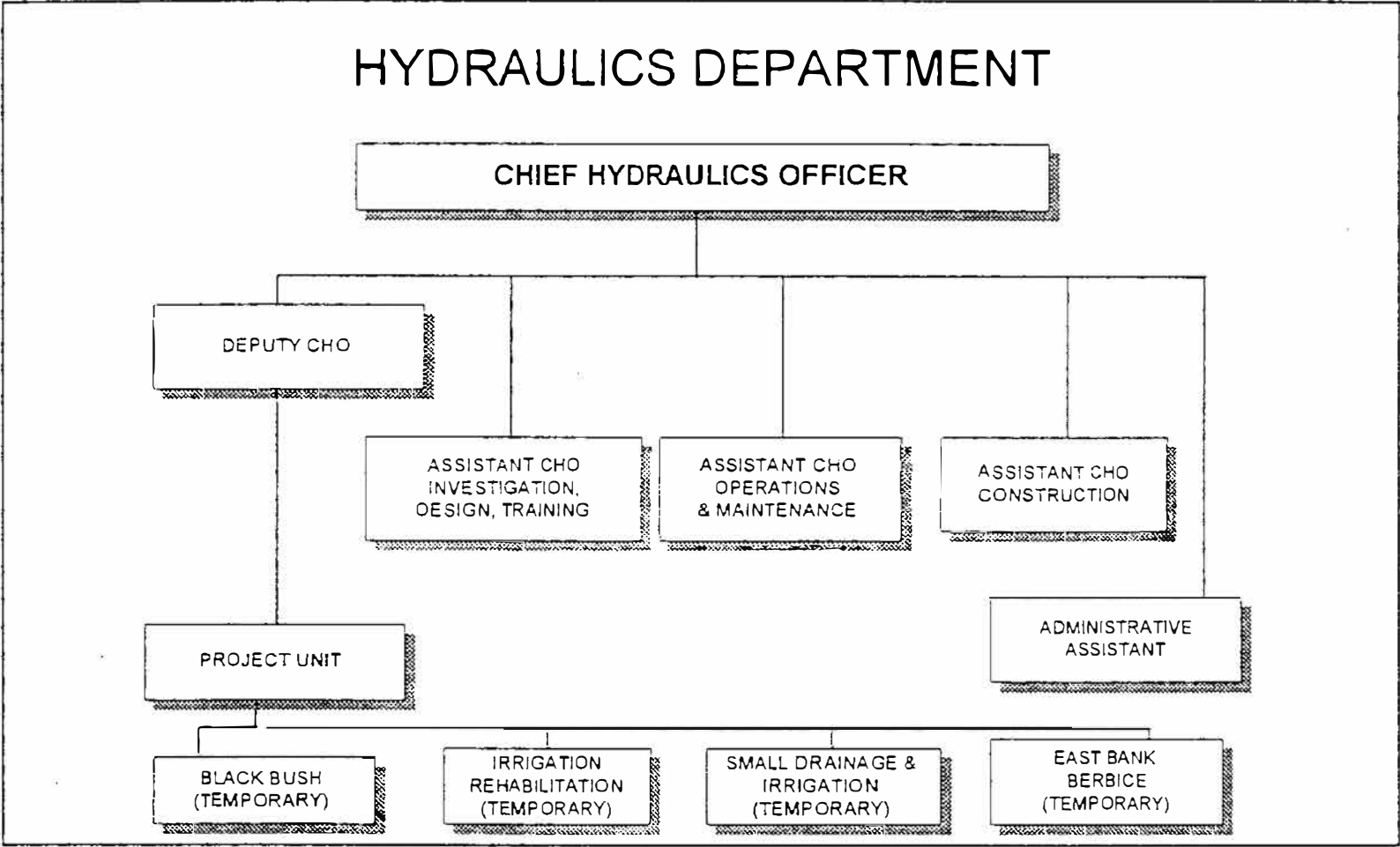


Table 35 : Work Programme 1994 and the Status of the Individual Projects at the end of 1994

REGION #	DESCRIPTION OF PROJECT	CONTRACT SUM G\$	STATUS AT THE END OF 1994
2	Repairs to Loam Dam across Pages swamp at Ituribisi	6,000,000.00	Contract awarded and mobilisation of Contractor in Progress. This project is expected to be completed by the first half of 1995.
2	Repairs to Ituribisi Relief Structure and Gates	3,000,000.00	Contract awarded. This Project is expected to be completed by the first half of 1995
2	Repairs to outfall sluice at Lima	2,500,000.00	Work in progress. Approximately 15% of this Project is completed. The contractor is experiencing difficulties in obtaining a compressor. This Project is expected to be completed by June 1995.
3	Desilting A - Line drain	9,000,000.00	Tender received and recommendation for award made. This Project is expected to be completed by June 1995. Completed
3	Cleaning seepage drain adjacent to Brocasirie Conservancy	1,386,900.00	Completed
3	Installation of green Heart Revetment of Canal #1	3,257,400.00	Tenders received and recommendation on award of contract made. This Project is expected to be completed within the first half of 1995
3	Repairs to Maripa sluice and closing Bamboo Creek	4,500,000.00	Work in progress, approximately 50% of this project is completed however the project is delayed due to the inability of the contractor in obtaining the necessary skills required to dismantle certain parts of the structure.
3	Dismantle abandoned sluice structure at Canal #1	875,000.00	Completion date July 1995.

REGION #	DESCRIPTION OF PROJECT	CONTRACT SUMS	STATUS AT THE END OF 1994
3	Repairs to Maripa sluice and closing Bamboo Creek	4,500,000.00	Tenders received and recommendation on award of contract made. This Project is expected to be completed within the first half of 1995
3	Dismantle abandoned sluice structure at Canal #1	875,000.00	Work in progress, approximately 50% of this project is completed however the project is delayed due to the inability of the contractor in obtaining the necessary skills required to dismantle certain parts of the structure. Expected completion date July 1995.
3	Desilting Canals and drains in Blankenburg		Completed
3	Repairs to Blankenburg sluice		This work was completed by the Region 3 Administration
4	Constructions of reinforced concrete outfall sluice and inlet and outlet works at Craig	11,994,000.00	The contractor has been given the Engineer's order to commence work. This Project has been delayed because of the difficulties in acquiring the house which is within the rights of the way of the drainage channel in the sluice.
4	Repairs to sluice at Hope	2,633,020.00	Completed
4	Cleaning and desilting drains at Hope Estate	11,325,000.00	Completed
4	Repairs to gate guides at Victoria	350,000.00	Completed
4	Desilting Triumph East Side Line Drain works at Craig	1,570,000.00	Completed
4	Construction of check structure to Triumph Side Line Dam	445,000.00	Completed

4	Construction of relief boxes at Buxton	2,594,805.00	Contract awarded. This project is expected to be completed within the first quarter of 1995.
4	Desilting Canals and Drains in Unity/Lancaster	5,070,873.00	Work in progress. Approximately 5% of this project is completed. Expected date of completion April 1995
6	Replacement of Manarabisi Pump and Engine	30,000,000.00	Order placed for Pump and Prime Mover
6	Desilting Manarabisi Canal	4,500,000.00	Contract award. This project is expected to be completed by June 1995
6	Desilting Adventure Whim Facade drain	3,500,000.00	Work in progress. Approximately 20% of this project is completed. Expected completion date, February 1995
6	Repairs to Sluices at #52, 66 and 74 Villages	2,000,000.00	Completed
6	Rehabilitation of Drainage system in Bartica	3,000,000.00	Work in progress. Approximately 30% of this project is completed
7	Flood prevention for Kara Kara area	5,000,000.00	This project is in design stage
10	Cleaning canals and drains in Wakenaam	6,000,000.00	Completed
3	Cleaning canals and drains in Windsor Forest	800,000.00	Completed
3	Cleaning canals and drains in Leguan	3,056,560.00	Contract awarded. This project is expected to be completed by June 1995.

Table 36 : Emergency Projects Undertaken in Drainage and Irrigation by the Hydraulics Department together with their Status at the end of 1994.

% ACHIEVED	ANALYSIS OF SUCCESS OR FAILURE	CONTRACT SUM GS	STATUS AT THE END OF 1994
3	Cleaning Main drain at Canals # 1 and 2, West Bank Demerara	464,770.00	Completed
3	Dismantling and Installation of Sluice Gate at Sisters Village	311,972.00	Completed
3	Scaling of Sluice at Bagotsville	900,000.00	Completed
3	Desilting channels in La-Jaloune area	1,600,000.00	Work in progress. Twenty percent (20%) completed. Expected completion date February 1995
4	Installation of self acting gate at Garden of Eden	470,398.00	Completed
4	Desilting channels and repairs to structure at Coverden	1,620,000.00	Work in progress. Approximately 20% of project is completed. Expected completion June 1995
4	Cleaning and desilting channels and drains and repairs to Access Dam at Cane Grove	3,940,200.00	Completed
4	Repairs to Pump at Cane Grove	800,000.00	Completed
4	Cleaning Clonbrook Middle Walk	1,570,000.00	Completed
4	Cleaning and desilting main canal at Mocha-Arcadia	716,000.00	Completed
6	Empoldering works at Germania	1,500,000.00	Work in progress. Sixty percent (60%) of this project is completed. It is expected that this project could be completed by March 1995
6	Cleaning channel and installation of revetment at Crabwood Creek	2,511,250.00	Completed
3	Desilting A-Line Canal - 4,000 ft	1,386,900.00	Completed
3	Installation of Green Heart box culvert at Canal #2 Polder	180,000.00	Completed
3	Grading of four miles access dam parallel to Parika main drain	360,000.00	Completed

HYDROMETEOROLOGICAL DEPARTMENT

Objectives and Functions

The Hydrometeorological Department is responsible for providing information on the climate and water resources of Guyana to aeronautical, mining, fishing, engineering, and other agencies to aid the socio-economic development planning of the country. In pursuit of this objective. The Department carries out the following activities:-

- Operating the National Meteorological Station Network (NMSN) and the National Hydrological Station Network (NHSN) for the evaluation of climate and water resources and related disasters;
- Collecting, processing, controlling quality, archiving and retrieving data from the NMSN and NHSN;
- Analysing data and providing information to agencies that are planning and designing costly engineering, agriculture, mining, forestry and communications projects; and
- Analysing Western Hemispheric lower and upper atmospheric weather data and ensuring the availability of forecasts to aeronautical and national productive agencies.

STRUCTURE

The Department is headed by an Acting Chief Hydrometeorological Officer and comprises the following Sections:-

- Surface Water Hydrology
- Ground Water Hydrology
- Climatology

- Aeronautical Meteorology
- Agricultural Meteorology
- Administration

Table 37 sets out the staffing situation as at the end of 1994

The Organisation Chart of the Department is provided overleaf.

The Chief Hydrometeorological Officer is still on secondment to the Caribbean Meteorological Institute (CMI) Barbados.

Staffing and Working Conditions

The Department has been operating under severe staff constraints which have now developed into a chronic problem. It has now become impossible to recruit Hydrometeorological Technical Assistants, mesoro Technician 1 (a post requiring GCE 'O' Levels/CXC passes in at least four (4) subjects, including English Language, Physics and Mathematics) given the salaries being offered. Most categories of staff have been leaving the Department for more lucrative employment elsewhere.

During the year, two Hydrometeorological Technical Assistants and one driver were recruited.

At the same time, the following positions resigned:

Meteorological (ag)	(2)
Senior Met. Tech.	(1)
Met. Tech. 1	(2)
H.T.A.	(4)

Four persons who absconded in previous years are still to be dismissed.

Training

A refresher course for H.T.A.s from interior locations was conducted during 1994. Three officers were involved in training programmes. One officer successfully completed a Class II plus course at the CMI, another completed the Class III Meteorology course and the other officer is presently under-going training at the B.Sc. level in Civil Engineering at the University of Guyana.

A training course on LANDSAT interpretation in Brazil from 9th - 19th May, 1994 was attended by another officer.

Conference and Seminars

The Chief Hydrometeorological Officer attended the following conferences held in the Cayman Island on 14th - 18th November, 1994.

- Meeting of Directors of Forecast Officers of the Caribbean Meteorological Organisation.
- Meeting of Board of Governors of the Caribbean Meteorological Institute
- Thirty-Fourth Meeting of the Caribbean Meteorological Council of Ministers.

A Workshop on CLICOM in Bolivia, 4th - 18th November, 1994 was also attended by an officer.

Main Features of The 1994 Work Programme

The performance of the Department may be described as satisfactory considering the many constraints experienced. Table 38 shows the main targets and achievements of the Department in 1994.

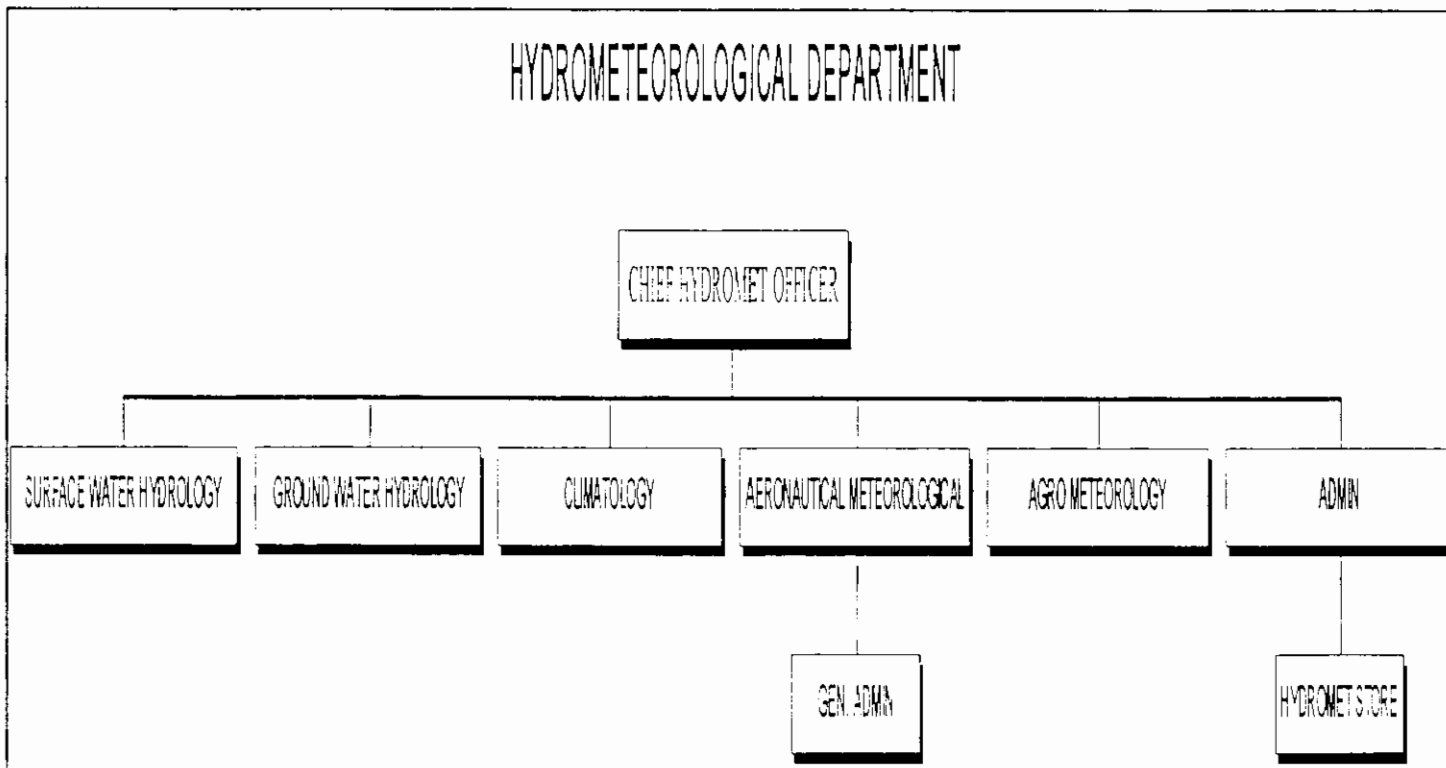


Table 37 : Hydrometeorological Department : Staffing 1994-12-31

POSITION	NUMBER OF POSTS	POSTS FILLED	POSTS VACANT
Chief Hydromet Officer	1	1	0
Specialist Meteorological Meteorologist	3	2	1
Meteorologist	3	0	3
Meteorological Officer	2	2	0
Senior Meteorological Technician	9	5	4
Meteorological Technician II	5	0	5
Meteorological Technician I	21	1	20
Specialist Hydrologist	2	1	1
Hydrologist	2	0	2
Hydro. Superintendent	1	1	0
Hydro. Officer	1	1	0
Senior Hydro. Technician	3	0	3
Hydro. Technician II	5	10	4
Hydro. Technician I	9	0	9
Hydromet Technician Assistant	20	15	5
Senior Materials Technician	1	0	1
Admin Assistant	1	0	1
Outboard Motor Mechanic	1	0	1
Stores Clerk I	1	0	1
Storekeeper II	1	1	0
Supply Expeditor II	1	1	0
Accounts Clerk II	1	0	1
Typist/Clerk III	1	0	1
Typist/Clerk II/I	4	2	2
Confidential Secretary	1	0	1
Vehicle Driver	3	2	1
Office Assistant	2	2	
Cleaner	4	0	
Total	109	42	67

The following are identified as the main constraints the department faced:-

- severe staff shortages which developed into a chronic problem by the end of the year;
- curtailment of field trips through shortage of funds;
- late purchasing of needed supplies;
- late release of funds to purchase spares and expendables;

- the frequent break down of electronic equipment at the Timehri Meteorological Office;

- poor state of meteorological and hydrological equipment;

- loss of time in getting data from the data center and spares and expendables from the stores which are not housed at the Head Office.

The Hydrometeorological Service organised a seminar for media Practitioners on "Climate Change and its Consequence

for Guyana". At this Seminar 4 papers on Climatic Change were presented by hydromet. Staff viz:-

- Climate Change: Facts and Uncertainties
- Climate Change: Impacts on Agriculture in Guyana
- Water and the Environment in Guyana
- Observed Climate Trends in Guyana

The Department also responded to requests for data from a large number of national and international agencies.

Table 38 : Hydrometeorological Department : Summary Hydrometeorological Service Activities 1994

ACTIVITY #	ACTIVITY	TARGET SET FOR 1994	% ACHIEVED	ANALYSIS OF SUCCESS OR FAILURE
1	Contribution to International Organisation	Contribution to CMI, CMO and WMO		
2	Climate Section Maintenance and operation of National Meteorological Stations Network	Maintenance and operation of 50 Rainfall, 8 Climatic and 5 Synoptic Stations	8.00	Difficulty in obtaining personnel for manning stations. Late arrival of spares
3	Process of data from National Meteorological Stations Network	Processing of 1 year's data for each element for 5 Stations	1.5	Shortage of trained staff (staff shared with TMO).
4	Publishing of Hydromet. Data	1 Climate and 1 Hydro year book 20 weekly and 5 monthly Bulletins	2.0	Shortage of trained Staff
5	Purchase of equipment spares and expendables	Purchase of 3 Automatic Weather Station and spares for existing instrument	1.5	1 AWS not delivered despite payment made
6	Manufacture of Met. Equipment	Manufacture of 20 rain gauges 5 thermometer screens and 20 measuring jars	0.1	No reasonable manufacturer found to produce measuring jars
7	Rehabilitation of Hydromet. Station	Rehabilitation of 3 Meteorological Stations	3.7	Difficulty in obtaining flights to Karetur Falls

Table 39 : Hydrometeorological Department ; Summary Aeronautic Section Activities 1994

ACTIVITY #	ACTIVITY	TARGET SET FOR 1994	% ACHIEVED	ANALYSIS OF SUCCESS OR FAILURE
8	Maintenance and operation of electronic and telecommunication	Electronic and telecommunication equipment to be maintained given adequate spares	3.85	CH-1 of the anmet equipment was operational for 55.6% of the year CH-2 of the anmet equipment was operational for 81.9% of the year APT was operational for 56.1% of the year.
9	Despatch of local data to World Weather Watch	Data from local synoptic stations despatch to WWW provided. Anmet and AFTN are operational	1.37	AFTN was unable to transmit data during the year 53.6% of the required data were despatched via the anmet circuit.
10	Plotting and analysis of surface and upper air charts for the Western Hemisphere	Preparation of charts upon receipt of data through Anmet	2.00	75% of the required charts were not plotted nor analysed, due to shortage of staff, low voltage, and other technical problems.
11	Supply of weather forecast	Supply of weather forecast to pilot, GDF Fisheries, Coast Radio etc.	6.52	13.5% of the required forecast were not prepared and disseminated, due to telephone problem, staff shortage and lack of data.

Table 40 : Hydrometeorological Department : Summary Hydrology Section Activities 1994

ACTIVITY #	ACTIVITY	TARGET SET FOR 1994	% ACHIEVED	ANALYSIS OF SUCCESS OR FAILURE
12	Maintenance and operation of Hydrological, Station Network	Maintenance and Operation of 15 stage, discharge and well stations for water projects	3.99	Lack of adequate staff have difficulty in receiving advances upon request contributed to the failure of achieving the target set
13	Processing of data from Hydrological Stations	Processing and achieving of one year of data April 1993 to March 1994	0.00	This target was achieved due to the failure in Target No. 12
14	Computerisation of Hydromet Data	Incorporating 500 years of Hydromet. data into computer data base	0.95	This poor achievement was due to the breakdown of the HYDATA computer and the Department's inability to access the HYDATA software on this computer
15	Rehabilitation of communication system	1, 4 x 4 Cab Pick-up, 1 0.3 engine, 1 Electronic Typewriter, 1 wooden boat, 1 overhead projector and intercom system to be paid for.	2.40	One item planned for purchase could not be bought due to the length of time awaiting insurance of the cheque by the CAU, by which time the price had increase above the value of the cheque.
16	Training of Staff	1 BSc, 1 class II, 1 class III and 2 short courses provided fellowship are available	0.64	No qualified staff available for further training
17	Special data analysis and filed investigations	4 research reports	6.00	Four research reports were completed during the year
18	Rehabilitation of head Office and Timahri Meteorological Office	Repairs to northern wall, doors, ceiling of Spec. Met. (C) ag. Office, rehabilitation of bottom flat of head office, repairs to roof at B. Gardens, repairs to windows, toilet facilities at TMO	3.50	Failure of Budget releases on time, and delays by contractors in submitting estimate contributed mainly to this low achievement.
19	Compilation of Agriculture Bulletin	Analysis of climate elements to produce weekly bulletin of climate out-look.	0.48	Lack of staff and vehicular problems compounded the failure in achieving a higher level of attachment of this target

Table 41 ; Hydrometeorological Department : Unprogrammed Works

ACTIVITY #	OUTPUT/TARGET VARIABLE UNPROGRAMMED WORKS	BRIEF DESCRIPTION OF TARGET	BRIEF DESCRIPTION OF WORK DONE	% ACHIEVED
1	Climate data for St Stanislaus College	Field study for CXC Geography	Monthly Rainfall, Sunshine and Mean Temp data	0.5
2	Climate data for Ministry of Public Works Communication and Regional Development	Road construction feasibility studies	1983 - 1993 monthly rainfall for Charity, McNabb, Onderneeming and Capoey compound	1.0
3	Hydrology data for NARI	For Guyana - Tropenbos (Project Mabura Project)	1992 monthly 1984 - 1988 mean annual rainfall, discharge, water quality, drainage area mean annual flow for Demerara Area	1.0
4	Climate data for Medstar Co. Ltd	Works for Central Housing and Planning Authority	Monthly rainfall data - August 1993 to January 1994	0.5
5	Climate data for Hydropower	For use by Chinese delegation for Hydropower studies	Daily rainfall 1957 to 1991 for Kamarang Bartica and Ikueibisi	0.5
6	Climate data for Statistical Bureau	For the preparation of the Statistical Bureau Quarterly Report	Daily means Jan - March for 1994 for rainfall, sunshine max. temp. min temp and relative humidity for Georgetown	0.5
7	Climate data for design and construction Series Ltd	Rehabilitation of drain at Vincent Village	Annual rainfall for 30 years at Enmore	
8	Climate data for HICA	Investigation of cashew nut disease	10 years daily and monthly - max. temp, min temp, mean temp, rainfall, humidity, sunshine and evaporation and St Ignatius	1.0
9	Climate data for UG Student	Research in annual seasonal variation rainfall and evaporation	1951 to 1983 monthly, rainfall and evaporation, for Georgetown, Linden, Lethem, Anna Regina and Corriverton	0.1
10	Climate data for Office of the President	To update information	A paper on General Climate conditions and periods of dry and wet seasons and ranges in Temperature and rainfall	0.5
11	Climate data for Medstar Company Ltd.	To update information	A paper on General Climatic conditions and periods of dry and wet seasons and ranges in Temperature and rainfall	0.5
12	Climate data for GUYWA	Investigation of the feasibility or using wind mills in the water rehabilitation project	Monthly wind frequencies, sunshine and radiation for Georgetown and Lethem	0.5
13	Climate data for Terrence Fletcher & Associates	Study of drainage for Itica Village	Monthly rainfall 1981 to 1990 for Blairmont	0.5

ACTIVITY #	OUTPUT/TARGET VARIABLE UNPROGRAMMED WORKS	BRIEF DESCRIPTION OF TARGET	BRIEF DESCRIPTION OF WORK DONE	% ACHIEVED
14	Climate data for UG Student	Final year project on Land of Canaan Outfall Sluice design	Maximum 1 day rainfall for 30 years	0.5
15	Climate data for Mazaruni Forest Industries Ltd	For forestry management Planning	Monthly rainfall for the last 10 years for Issano, Tiboku, Apaikwa, Enachu and Kurupung	1.0
16	Climate data for Guybulk Shipping	To assist in the design of a transshipment loading project	10 years of daily, monthly and yearly rainfall and wind data for Georgetown and Blairmont	1.5
17	Climate data for Statistical Bureau	For the preparation of the Statistical Bureau report	Monthly means for Georgetown from April 1993 to June 1994 for 6 climatic elements	0.5
18	Climate data for DEMTOCO	To investigate pollution reports	87 months of wind frequency and 1 wind rose from Botanic Gardens	1.0
19	Climate data for Government Technical Institute Student	To complete class assignment	Daily rainfall for the first week in July for period 1990-1993	0.5
20	Climate data for Hanson Import Export	Economics on the purchase and storage of equipment	8 months of max and min temp. mean relative humidity and mean temp.	0.5
21	Climate data for Roraima distributors	Economic storage goods	12 months mean max and min temp. humidity and highest and lowest rainfall in 1995	0.6
22	Climate for Guyana Sea Defenses (Project Extension Unit)	Sea Defence Project studies	Daily rainfall max and min air temp. Sunshine radiation for MARDS and Blairmont Estate	1.0
23	Climate data for Georgetown Sea Foods and Trading Company Ltd	To arrange survey in relation to Fisheries	22 monthly air temp. 2 annual max and min temps.	0.5
24	Climate data for University of Guyana Environment studies	Scientific research on Mangroves in the MMA (Onvervaag area)	Monthly rainfall maximum temperature for MARDS, Weldad, Fort Wellington, Bath Front and Bath Back	0.5

LANDS AND SURVEYS DEPARTMENT

MISSION STATEMENT

The mission of the Lands and Surveys Department is to appropriately map the land and water resources to promote the development of State and Government Land for agricultural and associated settlement, to issue titles as possible to bona-fide farmers for land suitable for agricultural development, to collect all outstanding rent, to provide accurate and reliable information to the public, other Ministries and Agencies to improve and maintain good customer relationships by providing better services, to monitor the behavior of the sea for the design of sea defence and to administer the Land

Surveyor's Act and the River Navigation Act.

STRUCTURE & FUNCTIONS

The Department, which is headed by the Commissioner of Lands, consists of the following divisions:

- Lands Administration
- Surveys & Mapping
- General Administration & Finance

The Lands Administration Division is divided into the following sections:

- Lands Administration (undeveloped lands)

- Land Development (developed lands); and
- Revenue Collection

The Surveys & Mapping Division is divided into the following sections and units:

- Cadastral & Topographic Surveys
- Mapping
- Hydrographic Surveys
- Regional Surveys Coordinating

The staffing position of the Department as at the end of December 1994 was as follows:

Table 42 : Lands and Surveys Department : Staffing at 1994-12-31- Administrative Group

DESIGNATION	APPROVED POSITION	POSITION FILLED	POSITION VACANT
Commissioner of Lands & Surveys	1	1	-
Principal Assistant Secretary	1	1	-
Personnel Officer II	1	-	1
Administrative Assistant Finance	1	-	1
Registry Supervisor	1	1	-
Total	5	3	2

LANDS & SURVEYS DEPARTMENT

COMMISSIONER OF LANDS & SURVEYS

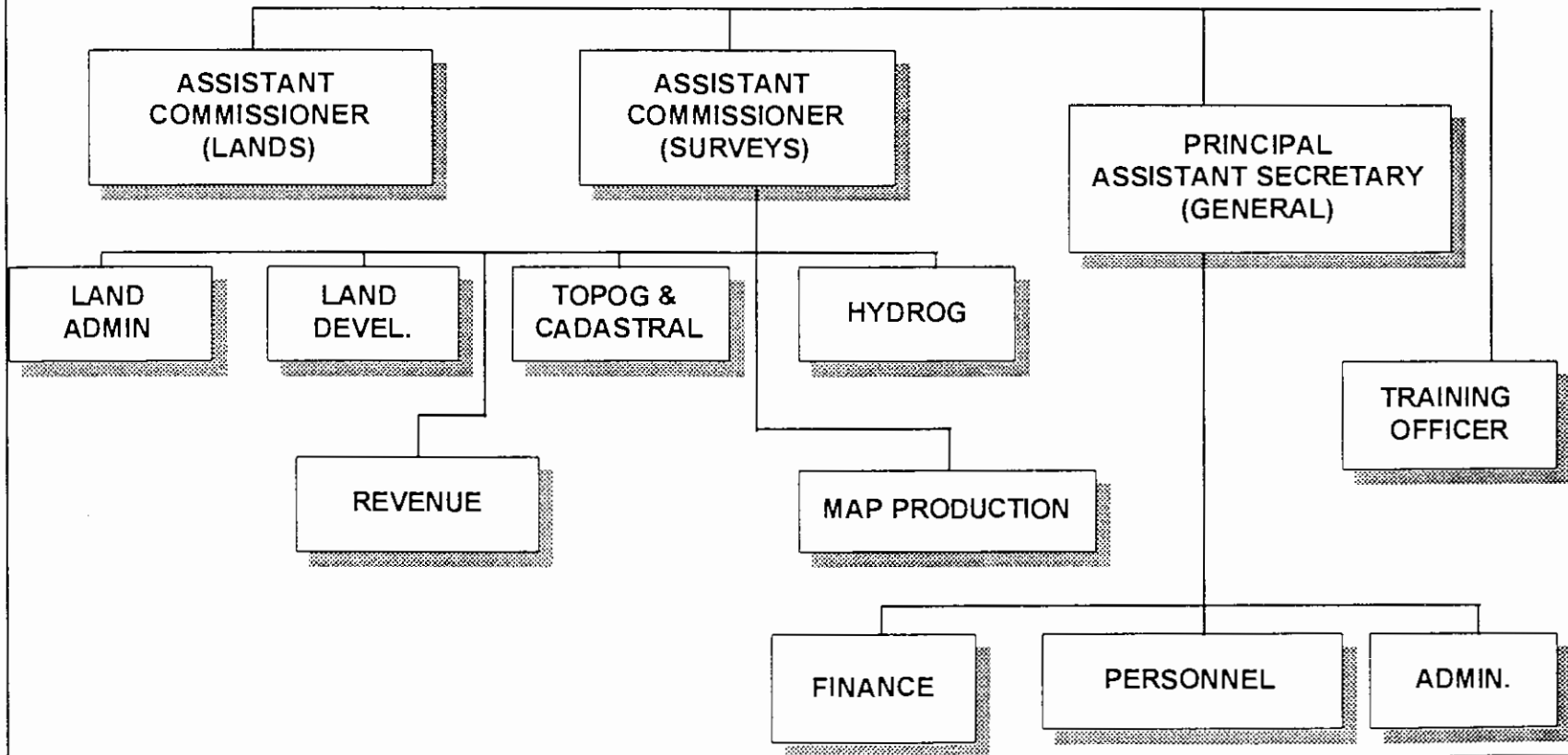


Table 43 : Lands and Surveys Department : Senior Technician Group

DESIGNATION	APPROVED POSITION	POSITION FILLED	POSITION VACANT
Assistant Commissioner	2	2	-
Supt. of Surveys	2	-	2
Supt of Lands	2	2	-
Reg. Cadastral Surveys Co-ordinator	1	1	-
Senior Surveyor	4	3	1
Cartographer	1	1	-
Senior Land Inv. Officer	1	1	-
Surveyor	8	7	1
Training Officer	1	-	1
Electrical Engineer	1	-	1
Cartographic Supervisor	1	-	1
Land Administrative Officer	4	-	4
Land Development Officer	1	-	1
Total	29	17	12

Table 44 :Lands and Surveys Department :
Other Technical and Craft Skilled Staff

DESIGNATION	APPROVED POSITION	POSITION FILLED	POSITION VACANT
Survey Technician	11	8	3
Acc. Machine Operator	2	2	-
Sen. Asst. Draughtsman	1	-	1
Asst. Draughtsman	3	1	2
Mapping Technician II	2	1	1
Mapping Technician I	2	-	2
Mapping Technician Trainee	8	1	7
Cartographic Technician I	1	1	-
General Foreman	1	1	-
Store Keeper II	2	1	1
Sailor II	1	-	1
Sailor/Cook	1	1	-
Supply Exp II/1	1	1	-

DESIGNATION	APPROVED POSITION	POSITION FILLED	POSITION VACANT
Boat Captain	1	-	1
Land Development Trainee	2	-	2
Launch Engineer	1	-	1
Senior Elect. Technician	1	-	1
Total	41	18	23

Table 45 : Lands and Surveys Department : Clerical and Office Support Staff

DESIGNATION	APPROVED POSITION	POSITION FILLED	POSITION VACANT
Accounts Clerk III	2	1	1
Accounts Clerk II	3	3	-
Typist Clerk III	1	-	1
Typist Clerk II (General)	2	1	1
Typist Clerk II 1	10	10	-
Office Assistant	2	2	-
Vault Assistant	2	1	1
Telephonist	1	-	1
Total	23	18	5

Table 46 : Lands and Surveys Department : Other semi-Skilled and Unskilled Staff

DESIGNATION	APPROVED POSITION	POSITION FILLED	POSITION VACANT
Foreman - Survey Crew	1	-	1
Compound Attendant	1	-	1
Gardener II	1	1	-
Laborer	1	1	-
Driver Mechanic	4	2	2
Cleaner	4	4	-
Total	12	8	4

Description of Divisions and Departments

The Survey and Mapping Division

This Division has been sub-divided into four (4) sections viz.:

- (a) The Cadastral and Topographic Surveys Section.
- (b) The Mapping Section
- (c) The Hydrographic Survey Section
- (d) The Regional Cadastral Survey Unit.

Heading this division is the Assistant Commissioner Lands and Surveys. The day to day running of each sub-division or section is managed by a Superintendent. However, the section mentioned at (d) is supervised by the Regional Cadastral Surveys Co-ordinator who has similar status to that of a Superintendent while the Mapping Section is managed by a Cartographer.

The Cadastral and Topographic Surveys Section

Supervision of this section is the responsibility of the Superintendent of Surveys (Cadastral and Topographic). During the year under review, the staff of this section comprised the following:-

- Two (2) Senior Surveyors
- Two (2) Surveyors
- Two (2) Survey Technician
- One (1) Senior Assistant Draftsman and
- Two (2) Vault Attendant

The main functions of this section are as follows:-

- (a) To survey and sub-divide State and Government Lands to facilitate the issue of titles thereto farmers,

entrepreneurs and other developers.

- (b) To survey and sub-divide State, Government and privately owned lands under the Lands Registry Act, Cap. 5:02 for the purposes of inventoring the ownership of lands in areas where titles are obscure and to facilitate the issue of titles to such lands by the Land Court and hence their use in negotiating development capital.
- (c) To plot and draft plans of areas surveyed by Surveyors of the Department.
- (d) To record and reproduce plans by Private Surveyors under the Lands Surveyor's Act, Cap. 97:01.
- (e) To maintain Cadastral Index Maps, Plans, Leases, Diagrams and survey field notes derived from surveys of State and Government Lands.
- (f) To provide surveying and mapping control (vertical and horizontal) networks throughout Guyana for the purposes of systematically mapping the country at various scales and secondly, to provide the reference for the collection of data required for the designing of engineering works. From Geodetic Surveys, as they are known, data is acquired which enable large scale maps to be compiled for ongoing agricultural/planning and development in the areas of land titles, soil studies, drainage and irrigation projects and other urban and rural development works.
- (g) To distribute maps, prints and the Gazetteer of Guyana produced by the Department to interested persons at cost.
- (h) To assist the Land Administration Division in the inspection of lands to

monitor, instances of encroachment on Government or State Lands with the view of regularising same thus protecting such lands against adverse possession.

- (i) To assist the general public regarding information on, and the preparation of description for application of State and Government Lands.

Mapping Section

The supervisor of this section is the Cartographer who reports directly to the Assistant Commissioner Lands and Surveys (Surveys).

During the period under review the staff of this section comprised the following:-

- One (1) Cartographic Supervisor
- Two (2) Mapping Technicians 11
- One (1) Mapping Technician I

Basically the function of this section is to prepare and publish appropriate maps of Guyana at various scales for development planning and administration. To produce and reproduce the maps of this section four (4) other sub-sections have been formed viz.:

- (a) The Photogrammetry Unit
- (b) The Topographic draughting Unit
- (c) The Photomechanical Unit and
- (d) The Lithographic Printing Unit

The Hydrographic Survey Section

This section is managed by the Superintendent of Surveys (Hydrographic) who reports directly to the Assistant Commissioner Lands and Surveys (Surveys). It consists of - one (1) Senior Surveyor, one (1) Survey Technician and one (1) boat hand.

The basic functions of this section are to conduct Hydrographic Surveys of the coastlands on a regular and systematic basic

so as to facilitate the design of appropriate sea and river defenses and the prediction and monitoring of the critical areas of erosion and breach.

The Regional Cadastral Survey Unit

After regionalisation of the Lands and Surveys Department in 1982, it was observed that Cadastral Surveys in the riverain and coastal and interior areas were not being executed by the respective Regional Surveys staff. From an appraisal of the Regional staff it was concluded that there was very little or no expertise in the Regions to conduct these surveys in order for farmers to obtain titles for lands within these areas.

To monitor and give the necessary advice in the execution of these surveys, the Regional Cadastral Surveys Unit was established in 1985.

The supervisor of this Unit is the Regional Cadastral Surveys Co-ordinator. He was supported by two (2) Senior Surveyors and two (2) Survey Technicians.

The Lands Administration Division

The Division has been sub-divided into three (3) sections viz.:

- (a) Lands Administration (Undeveloped lands)
- (b) Lands Development (Developed lands)
- (c) Revenue Collection Section.

Heading this Division is the Assistant Commissioner Lands and Surveys (Lands). Each division is headed by a Superintendent with the revenue Collection Section being headed by an Assistant Secretary (Finance).

Lands Administration (Undeveloped lands)

Supervision of this section is the responsibility of the Superintendent of Lands (undeveloped lands) and the support staff comprised the following:- Two (2) survey technicians.

Land Development (developed lands)

This section is headed by a Superintendent of Lands (Land Development) and is

assisted by one (1) survey technician and one (1) Senior Lands Investigation Officer.

The main functions of these two sections are as follows:-

- (a) To process applications from farmers and other applicants for the issue of titles.
- (b) To prepare and issue leases and other titles to applicants.
- (c) To investigate and submit reports on lands disputes.

Revenue Collection Section

This section is headed by an Assistant Secretary (Finance) and assisted by one (1) machine operator and one (1) counter clerk.

The principal functions of this section are as follows:-

- (a) To collect rent and enter all payments in relevant registers.
- (b) To prepare and send notices to defaulting lessees.
- (c) To initiate legal action against defaulting lessees.

Table 47 ; Lands and Surveys Department : Survey and Review of Current year's Programme - Special Activities

ACTIVITY	TARGET SET FOR	TARGET ACHIEVED	ANALYSIS	REMARKS
Cadastral and Engineering Surveys	To inventorise the status of Sea Defence from Crahwood Creek to Pomeroon	100% completed. Over 200 miles of Sea Defence inventoried	This exercise was undertaken to provide technical data to enable the Sea Defence Board to monitor the condition of the Sea Defence	This would be an on-going exercise
Certification of Building Application	To check building applications to ensure there are no encroachment on reserves	100% completed. Over 50 applications were approved	This exercise was undertaken to advise the Central Housing and Planning Authority on building applications	This was an on-going exercise
Land investigation for development	To investigate the intermediate savannahs. Left Bank Berbice River	600,000 acres investigated and information submitted. 100% completed	Information was submitted to enable Government to plan development of intermediate savannahs	Other areas would be investigated also.
Land investigation in the manarabisi cattle pasture area	To submit a comprehensive report on status of all lands in the Manarabisi cattle pasture area	100% completed	Information required for allocation of land for beneficial occupation	On-going exercise to make lands available for beneficial occupation
Research and information for Guyana Rice Board	Establish legal framework to enable GRB to pass title to house lost at MARIDS	100% completed	Information required by GRB for legal purposes	Routine investigation
Research and information for Guyana Airways Corporation	To establish ownership of 32 Main Street and Ramp Site Ruinveldt	100% completed	Information on required by GAC for legal purposes	Routine investigation
Research and information for State Solicitor	To provide accurate information to the State Solicitor to represent the State on legal issues before the courts	100% completed	Information required for legal purposes	Routine investigation
Illegal occupation by cooperative Society at Jacks/Molexon Area Corentyne River	To investigate and report on complaints made by members of Jackson Creek Co-op Society about dispossession of their lands	100% achievement. Rights of farmers being protected	With the pressure for arable land increasing because of good prices for paddy farmers are reclaiming their lands	Routine investigation
Investigation of Guyana Brazil Boundary Marks and beacons	Meetings with Foreign Affairs Officer, Brazil Border Commission and reports submitted therefrom	100% achievement, meeting at Ministry of Foreign Affairs, data researched and submitted	An exercise to identify and upgrade/refine co-ordinate values of markers and beacons	On-going exercise
Investigation of land at Non-Pariel East Coast Demerara	To establish the legal position of the purchase of land by Felicia Baird Associates at Non-Pariel, East Coast Demerara	100% achievement report submitted	to enable the Government to decide on land allocation for housing development	Routine investigation
Investigation of land at Pln Houston East Bank Demerara	To establish the legal position re the purchase of land at Pln Houston by Marine Food Product Ltd.	100% achievement, report submitted	To enable the Government to decide on sale of land	Routine investigation

ACTIVITY	TARGET SET FOR	TARGET ACHIEVED	ANALYSIS	REMARKS
Lands held by Black Bush Rice Milling Company Ltd	To investigate and put up report re-allocation of lands held by Black Bush Rice Milling Company Ltd	100% completed, report submitted	To inform the Government on legal status of lands held by Company	Routine investigation
Illegal occupation of land at Pln Annandale	To investigate the illegal occupation of land at Annandale East Coast Demerara by Deodat Singh and submit report to State Solicitor	100% completed, report submitted	To provide legal status of land to enable State Solicitor to take legal action against Deodat Singh	Routine investigation
Illegal occupation of land by at Pln Philippi Corentyne Coast	To investigate the legal position of Lease # A4182 and submit report to Solicitor General for legal action	100% completed, report submitted	To provide legal status for court action	Routine investigation
Acquisition of Land at Pln Hope for the erection of a New Drainage Sluice	To investigate site and complete evaluation for acquisition purposes	100% completed, report submitted. Agreement signed	To provide legal status to State Solicitor	Routine investigation
Submission of information to State Solicitor to represent the State in Land cases	To investigate land disputes at Anna Regina, Charity, Vergenoegen, Black Bush Polder and submit reports to State Solicitor for legal action.	Land cases in the Court are time consuming and complex with the result that they extend over long periods of time	Research and accurate information have to be documented and presented to assist the court	Routine but complex investigations

Table 48 : Lands and Surveys Department :Summary and Review of Current year's Programme - Survey and Mapping

ACTIVITY	TARGET FOR YEAR	TARGET ACHIEVED	ANALYSIS	REMARKS
CADASTRAL SURVEYS	Survey of residential lots at Ituni Demerara River	100% completed	This survey executed to enable residents to obtain free hold title to their residential lots	Central Housing and Planning Authority to process applications
	Survey of Montrose, East Coast Demerara	80% completed	This survey was executed to enable residents to identify their house lots to get free hold title	Central Housing and Planning Authority to process applications
	Survey of Enterprise, East Coast Demerara	100% completed	This survey was executed to sub-divide Government Lands into house lots	Surveys executed for Central Housing and Planning Authority
	Survey of Coldingen, East Coast Demerara	100% completed	This survey was executed to sub-divide land into industrial lots	Survey executed for Gaibank for Industrial Estate
	Cadastral Survey for extension of Ogle Air Strip	100% completed	Required by the Civil Aviation Department	To allow for the extension of Ogle Air Strip
	Survey of portion of Botanic Gardens for issue of title	100% completed	To establish their Embassy	To facilitate the passing of free hold title
	Survey of Lands at Ebini Station for National Agricultural Research Institute NARI	100% completed	Identification of boundaries	To facilitate the passing of title to national Agricultural Research Institute NARI
	Acquisition survey at Ogle East Coast Demerara	100% completed	Legal requirement	To facilitate acquisition under and order
	Demarcation of boundaries identifying lost at Ogle Aerodrome	100% completed	To issue individual title	To facilitate acquisition under and order
	Occupation survey at West Watooka, One Mile Wismar, Blue Berry Hill, Lower Kara Karra and Amelia's Ward Region # 10	100% completed	Legal requirement	To provide information to enable Central Housing and Planning Authority to prepare lay out designs
	Land investigation to establish beneficial occupation	600 inspections completed - 80% achievement	Requirement for the processing of applications	This was a routine exercise
	Inspection and survey of boats in keeping with provisions of River Navigation Act	Deputy River Navigation Officers appointed and boats issued with certification of sea worthiness	Legal requirement to ensure safety of passengers	To train and appoint more officers to enforce the Law
	Notation of application on Cadastral Index Sheets	875 applications noted - 80% achievement	For accurate identification and advise on availability of land	Routine activity

ACTIVITY	TARGET FOR YEAR	TARGET ACHIEVED	ANALYSIS	REMARKS
	Checking and recording of Cadastral Plans	450 Plans were checked and recorded - 100% achievement	A legal requirement	Routine activity
	Checking legal publications applications for application to identify adverse possession	All publications checked and all applications checked, 115 application checked	A legal requirement	Routine activity
	Provision of information Government Agencies and business community	145 requests were researched and information provided - 80% achievement	Accurate legal and technical information required	Routine activity

Table 49 : Survey and Review of Current Year's Programme - Capital Estimates of Expenditure Survey and Mapping

ACTIVITY	TARGET SET FOR YEAR	TARGET ACHIEVED	ANALYSIS	REMARKS
National Land Registration and Geodetic Surveys	400 Cadastral surveys to issue long term leases to farmers	339 tracts covering 4014 acres were surveyed - 85% of targeted achieved	to enable farmers to receive long term leases	This would be an on-going exercise
	300 free-hold titles to be issued to residents of Land Development Schemes for house lots and homesteads	363 approvals issued to residents to obtain free-hold titles - 120% achievement	Residents of Schemes to get free hold titles for house lot and homestead - guarantee security of tenure	This would be an on-going exercise
	Establish of 20 Control Marks for identification of geodetic Network	20 marks established in the Cane Grove area - 100% achievement	Data required for establishment of Land information System	This would be an on-going programme

ACTIVITY	TARGET SET FOR YEAR	TARGET ACHIEVED	ANALYSIS	REMARKS
	<p>Strengthening capability of Lands and Surveys Department</p> <p>(a) In service training in Land Administration through two seminars</p> <p>(b) Training in Land Information System</p> <p>(c) To purchase Theodolite Levels, Outboard engine, boat, vehicles and other field equipment</p>	<p>Two (2) Seminars were held at Head Quarters - 100% achievement</p> <p>Conference in Land Information System at University of Guyana</p> <p>100% achievement</p>	<p>These seminars were held to clarify Land Administration Issues</p> <p>Five (5) members of Senior Staff attended conference on Land Information at University of Guyana - 100% achievement</p> <p>Vehicles and other field and office equipment enabled the Department to execute programme</p>	<p>This would be an on-going programme</p> <p>This would be an on-going exercise</p> <p>This would be an on-going activity</p>

Review of Land Rent Collection For 1994

During the year the sum of \$1,055,816.00 was collected

within Land development Schemes, representing an achievement of 80.2%, while \$4,260,673.00 was collected for lands outside of Schemes representing an achievement of 54.9% Notices to pay

current and outstanding rent were dispatched to defaulting lessees advising them to pay a total sum of \$2,325,000.00.

Table 50 : Lands and Survey Department : Statement of Land Rent Collected For the Year 1994

REGION #	AMOUNT COLLECTABLE FOR 1994	AMOUNT COLLECTED FOR 1994	AMOUNT OUTSTANDING	PERCENTAGE COLLECTED	REMARKS
1	324,000	32,296	291,704	10	
2	476,100	225,254	250,864	47.3	
3	547,848	254,742	293,106	46.5	
4	1,171,332	2,057,594	886,262*	175.7	
5	1,786,080	771,683	1,014,397	43.2	
6	173,040	176,881	3,778	102.2	
7	27,000	6,586	20,414	24.4	
8	441,840	326,059	115,781	73.8	
9	2,802,840	409,641	2,393,139	14.6	
Total	7,750,020	4,260,673	3,496,903	54.9	*in excess of target

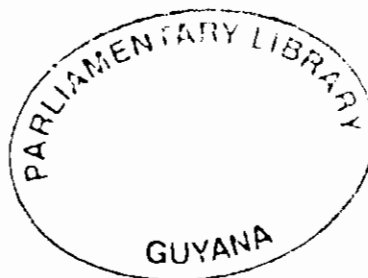


Table 51 : Lands and Surveys Department : Statement of Land Rent Collection from within Land Development Schemes

LAND DEVELOPMENT SCHEMES	AMOUNT COLLECTABLE	AMOUNT COLLECTED	AMOUNT OUTSTANDING	PERCENTAGE COLLECTED	REMARKS
Black Bush Polder	649,000	476,337	172,663	73.4	
Anna Regina	311,000	305,239	5,761	98.1	
Charity Amazon	145,000	45,673	99,327	31.5	
Vergenoegen	39,000	75,159	36,159	192.7	
Cane Grove	104,000	110,726	6,726	106.5	
Garden of Eden	8,000	8,482	482	106.0	
Soesdyke Linden	60,000	31,198	28,802	51.9	
Total	1,316,000	1,055,816	260,184	80.2	

GUYANA SEA DEFENCE PROGRAMME PROGRAMME EXECUTION UNIT

Progress Report on Sea Defence Component of IDA Credit # 2477 Guy: East Coast Demerara

Civil Works

On the 13th November 1993, a section of the sea defenses in the Lusignan area, part of the Project area collapsed. This breach caused severe flooding and resulted in heavy losses. An IDA mission to Guyana soon after this disaster agreed that this area of the work totaling 870 meters should be treated as priority and procurement of contractors and consultants speeded up.

The tender documents for the Lusignan contract (870 meters) was issued to ten selected tenderers on the 4th of May 1994 and tenders were opened on the 5th of July, 1994.

Tenders were received from two Contractors whose prices are set out in Table 52.

These prices were significantly more than the engineer's estimate of US\$1,715,000 (prepared during December 1993). The alternative tender submitted by Boskalis entailed the removal of the "bridging layer" of stones placed on the filter fabric and substituting a stronger fabric.

The lowest tenderer for the contract, was invited to attend a meeting on the 20th of July to discuss any means by which the tender price could be reduced without affecting the technical quality of the design and the specification. The main aim was to identify costs allocated to contractor's risk in order to see if the risks could be removed or minimised, without exposing the Government to unacceptable additional risk. A number of factors were identified, of which the most significant was amending

the specification such as to reduce the risk that the contractor would have to use expensive rock fill to make good excessive settlement resulting from consolidation of the underlying clay and sand layers. On July 25 Janin submitted a revised proposal amounting to US\$2.5 million, which was dependant upon them being given assistance to obtain sand to put in barges for the return trip to Tobago, where they intended to obtain rock.

It was concluded that, despite the large deduction in prices offered by Janin, it would be best to annul the tender and to instead invite tenders for a single contract for all of the work to be funded by the IDA. A major factor in this decision was that it would be very difficult to attract any competitive tenders for the small sum remaining after paying for the Lusignan contract.

Draft contract documents for the combined contract, now referred to as the "East Coast Demerara Contract", were received from SRKN'gineering during August. A check of these documents revealed a number of minor errors in need of correction in the Instructions to Tenderers and Conditions of Contract. More serious errors were found in the Specification and in the method of Measurement.

Essential changes were made to the contract document and these were forwarded on the 23rd of September to ten contractors, approved by the Government of Guyana and the IDA. These were:-

C O Williams Construction- Barbados

Janin Seaworks Construction JV Grenada

Boskalis Westminister Dredging bv Netherlands

Springpoint Management/TNL Construction JV- Canada

Sir Robert McAlpine- UK

Kier International- UK

West Indies Home Contractors- Jamaica

Van Oord ACZ bv- Netherlands

Great Lakes Dredging and Doeks Co- USA

Trinidad Contractors Ltd- Trinidad

The following areas have been included in this Contract:

For reconstruction Area A Lusignan 870 meters; Area B Mon Repos, 675 meters; Area C1 Hope/ Enmore 500 meters; for provisional reconstruction Area C2 Hope/ Enmore 513 meters and for rehabilitation, Area B Mon Repos, 160 meters; involving a total of 2,718 meters.

The total length is considerably less than originally anticipated (approx 6 km). This reduction was made after tenders for EEC works at West Coast Demerara and Essequibo Coast and IDA works at Lusignan were received. Prices quoted for the construction of sea defenses were in excess of US\$2,500 per meter compared to costs of US\$1,000 per meter used during the project appraisal stage.

On the tender closing date of November 2nd, tenders for the Works Contract were opened by the Central Tender Board and tender prices were read out as follows:-

Boskalis Westminister Dredging -	G\$1,160,322,042.00
Ditto - Alternative -	G\$1,256,094,527.00
Trinidad Contractors Ltd -	G\$1,126,408,733.80
Ditto - Alternative -	G\$1,021,703,497.80
Janin Seaworks JV -	G\$1,204,197,413.00

Ditto - Alternative -
G\$ 980,678,391.02
Spring Point Management/
TNE Construction JV -
G\$1,311,157,107.00

One of the tenderers (C.O Williams/McAlpine/Nehau JV) returned their tender document with a covering letter explaining that, due to the extensive temporary works required for this particular design, their cost was not likely to be competitive and therefore submitted no price.

A report was prepared on the tenders received for the work contract. The report concluded that there were insufficient funds available to construct the works as tendered and the lowest two tenders were from companies too small for us to feel confident that they could complete the contract satisfactorily.

The IDA agreed to visit the lowest priced tenderer in order to assess their capabilities and financial status. It was confirmed that, if the contractor was found to be satisfactory, a contract could be awarded for US\$6.5 million with a possible extension to US\$7.87 million if resources can be made available.

Consultancy Services

Contract Supervision

A short-list of three Consultants including two local firms was approved by the Government of Guyana and the IDA for supervising the Lusignan works.

Tenders for contract Supervision of the Lusignan Project were opened on the 2nd of June 1994.

Tenders were received from:

SRKN'gineering Guyana
Design and Construction
Services Ltd Guyana
Vikab/ Acer Trinidad/UK

An initial appraisal was made but the tender was annulled following the decision not to proceed with the construction contract.

For the larger contract the Government of Guyana and the IDA approved the following short list of consulting engineers to tender for the supervision contract:

Wallace Evans - Jamaica
British Maritime Technology
- UK
Sandwell Inc - Canada
NEDDECO - Haskoning - Netherlands
Cemco - Guyana
SRKN'gineering/Design and Construction
Services Ltd - Guyana
CEP Ltd - Trinidad

The tender document for contract supervision was prepared and on the 22nd of September was couriered to the short listed firms of consulting engineers.

Tenders for the Supervision Contract were opened at the Central Tender Board on November 8. The following consulting engineering firms submitted tenders:

SRKN'gineering in association with DCSI,
CEMCO in association with Mouchel
NEDDECO/Haskoning
Sandwell Inc.

Tender documents submitted by BMT Port & Coastal Ltd were received by the Central Tender Board on November 15 (7 days after the closing date) and was returned unopened.

The Ministry of Finance set up a separate tender assessment committee co-ordinated by is Mr. G. Howard, the Chief Hydraulics Officer to evaluate these tenders.

The tenders received from consulting engineers were assessed by this team. A conclusion was made regarding who should be awarded the contract, but the announcement awaits resolution of the difficulties on awarding the works contract.

Tidal and Morphological Study

Preliminary investigations on the location and types of wave data instruments are in process. The study will be performed in coordination with other coastal data collection programmes funded by other agencies e.g. IOCARIBE.

Cost Recovery for Sea Defenses

The operation and maintenance budget for the year 1995 was prepared and submitted to the Bank and to the Ministry of Finance. Cost estimates were as set out in Table 53.

The Consultants Swedeplan-SSPA undertook a Design and Feasibility study on a Guyana Shorezone Management Programme and presented their Interim Report due in August 1995. This report suggested various alternatives in cost recovery including combinations of user fees, targeted rates and more general tax financing.

The draft final report of this study was presented during November 1994 and the final report is expected early 1995.

Progress Report on CDB Loan No 8/SFR-GU: West Coast Berbice

Contract Supervision

During 1993 the Dutch Consulting firm, Nedeco/Haskoning, was selected to undertake designs and supervision based on their technical proposal. The Government and the Bank recommended price negotiations be done.

Negotiations were held with the Dutch firm on the 22nd March, and a successful agreement was made. Haskoning prepared the draft agreement based on these negotiations which were submitted to the PEU for approval before being passed on to the Ministry of Finance and to the CDB for

final agreement.

Difficulties were experienced in accepting the Haskoning tender for consultancy, the Bank insisted that Haskoning must include in their services a pre-tender qualification report and a tender appraisal report.

These activities had been excluded by the PEU during negotiations, because the Haskoning offer had exceeded the funds available and it was thought that the PEU had the ability to carry out these tasks.

The contract document was finalised and signed by the NAO and Senior Minister of Finance. Five copies were couriered to Haskoning on September 15. Four copies were signed and returned on the 30th of September. Prior to the Consultants coming to Guyana their mobilisation advance was paid and office space and facilities were identified.

Tender documents for the initial site survey and soils investigation were prepared and sent to Haskoning. Their comments were incorporated and tenders were invited from surveying and soil investigation firms, all based in Guyana. Three of the former and two of the latter submitted tenders which were opened on the 19th of September. Awards were made to Ground Structures Engineering Consultants for Soil investigations and P V Sanasi and Associates for topographical survey works.

Project Manager for the consulting engineers NEDECO (Haskoning), arrived in Guyana on the 2nd of November to commence design of the works to be funded by the CDB. On the following day, a start up meeting was held at which the project manager met representatives of the PEU, SRKN/engineering (NEDECO's associate consultant), Ground Structure Engineering Consultants (appointed by the PEU to carry out the soil investigation work) and PV Sanasi and Associates (appointed by the PEU to carry out the topographical survey) to discuss initial planning for the project.

Other members of the NEDECO team

arrived during the year as follows:

Project Manager/design Engineer 1st November, Contracts Specialist/ Structural Engineer 3rd November, Coastal/ Geotechnical Engineer 20th November, Hydrologist 21st November, Environmentalist 5th December.

Various members of the team are different from those included in the tender proposal because the timing of the project was changed and the nominated staff were no longer available. The replacement staff are however of similar or better experience than those originally proposed. The visit by the hydrologist was cut short due to a bereavement in the Netherlands and he returned to Holland on the 25th of November. He, however, returned to Guyana after one week's absence to complete the full period he was originally assigned on this project. He then again left Guyana on the 4th of November for a short visit to Thailand for work unrelated to The Guyana Sea Defenses and returned to Guyana on the 5th of December.

The ground investigation contract was completed satisfactorily by Ground structures Engineering Consultants and the report submitted in the second week of December. Determined efforts were made by Peter Sanasi Associates to speed up the topographical survey contract. Site work was completed early in December and by month end preparation of cross section drawings was 80% complete.

Nedeco submitted a Condition Survey report of existing roadside culverts as part of their initial investigations.

NEDECO's coastal engineer conducted a visual aerial survey, of the project area on the 28th of November to assist in the evaluation of the strategy for the design, which indicated that certain parts of the project area were undergoing the accretion cycle and that these were no longer emergency areas.

An interim report was submitted on

December 19th, a copy of which was sent to the Bank. Recommendations included the removal of the intercepting structures from the scope of works and a redefinition of critical areas due to changed foreshore conditions.

All members of the consulting team returned to Holland as follows:

Contracts/Structures	30 November
Coastal/Geotechnical	2 December
Hydrologist	17 December
Environmentalist	17 December
Project Manager/Design	19 December

Training

One candidate proceeded on a GRAIN STORAGE MANAGEMENT course in the United Kingdom with the National resource Institute. The course commenced on the 5th of September and concluded on the 15th December 1994. This candidate has since resumed duties at NPRGC.

Supply of Laboratory Equipment

Over the ensuing period between Loan Preparation and Borrower's eligibility for Disbursement, the focus and mandate of the NPRGC has changed tremendously, as a result from policy adjustment made towards Market Economy in the Rice Sector.

The NPRGC through the Project Execution Unit held discussions with the Bank to have the 1992 approved "Equipment List" revised to suit present requirements in relation to its new role.

Progress on European Council - Lome IV Grant: Essequibo and West Demerara Coasts

Civil Works

Designs for these works were completed

during 1993 by the Dutch firm DHV and tenders were invited through national and international advertisements.

A pre-tender site visit and meeting were conducted during the 15th to 17th of March, 1994. Representatives from 22 prospective tendering companies attended visits to Essequibo on the 15th March 1994, West Demerara on the 16th March 1994 and a meeting at Eve Leary on the 17th March 1994.

A total of 118 questions were raised prior to tender opening and answers to these were communicated to all prospective bidders.

Tenders for construction works were opened at the Central tender Board on May 17th. Five tenders were received and tender totals are set out in Table 54.

All of these tenders exceed the Engineer's estimate of G\$2.1 billion and the EC funds available as a grant of approximately G\$1.74 billion. Included in the tender totals are provisional items for the construction of approximately 1850 meters of sea defence and the provision of sheet piles and filter fabric for future use by the Hydraulics Division. If these items are removed from the contract then the tender sums reduce to those set out in Table 55.

The lowest tender falls within the funds available and this tender is based on the contractor being able to operate his own quarry.

Following an assessment of the bids and discussions with representatives of the funding agency and Government of Guyana officials including the Prime Minister and Senior Ministers of Finance, Agriculture, Works and Communications a decision was taken to further negotiate with the Joint Venture Group on their quarrying requirements and to assess their capability of undertaking the works.

The Italian tenderer PAC/Gelfi was visited by a representative from Sir William Halcrow and Partners from the 6th to the

8th of July. He submitted an advance draft of his report by fax on 12 July and the full report was received the following week. He concluded that they were well organised and keen to do a good job as they see the prospect of more work in Guyana at a time when opportunities in Italy are limited. There is a question mark about their financial strength, being relatively small contractors, and about their appreciation of the difficulties which they will have to face in Guyana, but on the whole he concluded that it would be worth taking the risk of appointing them to do the work.

The Prime Minister chaired a meeting on the 13th of July when the findings of this visit to Italy were discussed. It was decided to invite PAC/Gelfi to visit Guyana to see if outstanding details, notably their condition that they be given a suitable quarry similar to Teperu, could be resolved and at the same time to further review their capabilities. Three representatives accompanied by a translator were in Guyana from the 25th July to the 31st of July. PAC/Gelfi confirmed that their offer was based on the condition that they would be permitted free use of an existing quarry. Following their visit in July they concluded that only The Teperu quarry would be satisfactory.

The Prime Minister wrote to the Senior Minister of Agriculture on the 7th of September, to clarify certain conditions relating to the use of Teperu quarry by PAC/Gelfi. These included, that the contractor should

- comply with the Mining Act,
- adhere to prudent and internationally accepted standards of mining;
- provide a method statement;
- employ qualified personnel;
- only use the rock for the Lome IV Project
- carry appropriate insurance cover;
- not as a result of use of the quarry involve the Government of Guyana in any additional expense.

These conditions were already incorporated in the contract, primarily in Clauses 12, 14, 16, 17 and 31. On the 17th of September the Government and Edgeworth Construction International of Canada signed the joint venture agreement for development of Teperu-Itabu quarries. The press release said that the joint venture would provide the Italian contractor access to the quarry.

The EC advised that the contract would have to be signed on the basis of the contract as tendered. The only variation prior to the contract should be the removal of provisional items from the contract. Revision of the scope of works including redefinition of the lengths to be constructed and, if desirable, removal of supply items should be the subject of a Variation Order to be issued after award of the contract.

With the availability of the quarry established and decisions taken on the scope of works, the Cabinet resolved to accept the offer from PAC/Gelfi at a Cabinet meeting on the 8th of September. On the 9th of September the National Authorising Officer wrote to the EC recommending this course of action. It was evident that a decision would not be immediately forthcoming from Brussels and since the validity of tender guarantees was due to expire on the 14th of September, a fax was sent to PAC/Gelfi on the 12th of September requesting that they extend the validity of their tender. Faxes were sent on the same day to the other four tenderers advising them that it would not be necessary to extend the validity of their tender guarantees, since their tender sums were well in excess of the funds available. These tender guarantees were returned.

In a telephone conversation on the 15th of September the EC confirmed that Brussels accepted the proposal from the NAO to award the contract to PAC/Gelfi. Formal notification of award of contract was given by fax on the 27th of September which also confirmed the contract price at G\$1,593,206,960 with G\$238,981,044 as

performance guarantee.

The works contract was signed at 11:30 am on the 4th of November 1994, in the boardroom at the Ministry of Finance by the Minister of Finance for the Government and by the OAC/GELFI JV representative. A press release was read out by the Minister of Agriculture.

A PAC/Gelfi delegation of four returned to Guyana on the 28th of November. The office manager, commenced his duties by opening an office at 171 Peter Rose Street, Queenstown. At a meeting held on 29 November, it was agreed that the official start of the contract would be the 9th of January 1995, in order to allow time for the consulting engineer to be appointed and for him to take up his duties as Supervisor's Representative.

Preparation of Variation Order commenced. The VO is to instruct a change in the scope of work to include the areas in most urgent need of remedial work. All sea defenses in the revised scope of work were in the contract as tendered, but some areas previously designed as provisional have been included at the expense others less seriously deteriorated areas previously included in the contract. The total length of sea wall to be constructed will remain unaltered at 6,114m. The VO will be issued after the commencement order has been given.

Work Supervision

Until the decision to award the works contract was taken, there was some degree of doubt that the contract may have to be annulled. For this reason the tender dossier to invite bids for the supervision services was not sent for printing until the 19th of September. The tender dossier was couriered to the short listed consultants on the 22nd of September. The three consulting engineering companies invited to tender were:

Frederick R Harris B V Netherlands;
I. G Mouchel & Partners Ltd UK;

SRKN'gineering/Design and Construction Services Ltd Guyana

Tender Amendments Nos 1 and 2 were prepared and sent to the tenderers on the 26th and 29th September respectively and bids were opened on the 8 of November. A tender assessment committee appointed by the Ministry of Finance and including the Counterpart Project Director performed the assessment.

The supervision contract was awarded to the joint venture of SRKN'gineering/DCSL on the 2nd of December and an initial meeting was held with them on the 6th of December. Representatives of SRKN/DCSL were introduced to the Contractor at a meeting on the 9th of December. Future EC Funding. On the 27th of September NEDCO's Coastal engineers visited Mon Repos and Lusignan with three engineers from the Spanish firm of consulting Engineers, Sociedad Limitada De Consultores Espanoles. These engineers were visiting Guyana at the request of the EC to investigate the most deserving recipients of the next tranche of funding from Lome IV.

The team asked that three critical project areas be identified with construction costs in the vicinity of 2 million ECU's each. Three such areas which were included in the SRKN'gineering study of 1993 but were excluded from the IDA funded areas were recommended. See Table 5G.

The team was also presented with maps showing current project areas and areas that may be considered as critical and in need of further funding.

IDB Loan NO. 877/SF-GY: Corentyne and Essequibo Consultancy Services

A Memorandum of Understanding between

the Government of Guyana and the IDB was signed during the first week of July. This MOU identified the respective responsibilities of the PEU, Sea Defenses and the Executing Unit, Agriculture Sector Hybrid Programme. Article IXX of the MOU states that the EU shall be responsible for the technical aspects.

The Terms of Reference will require that the consulting engineer

carry out a complete re-survey and design of the IDB designed areas, prepares tender documents and supervises construction, design landing stages for local boats bringing goods to the markets at Skeldon (Corentyne) and at Anna Regina (Essequibo); specify the upgrading of access dams and bridges, survey the location of buildings which may obstruct the works. Some building may have to be demolished, but others, may prove to be too substantial and valuable to be demolished and here it may be necessary to construct the works from the seaward side of the existing defenses, provide all necessary facilities and equipment for the execution of his services except office space during the design stage (provided by the PEU) and site offices and transport during the construction phase (provided by the construction contract);

need not provide inspectors or office administration staff during the construction phase, as these will be provided by the PEU. A tender dossier prepared by the PEU and approved by the IDB was sent to five (5) short listed firms. This short list was prepared by the Executing Unit (EU).

The method of assessment of tenders for the IDB design and supervision contract was discussed with IDB and PEU

representatives on 15th December, opened on the 20th of December, were received from four consulting engineers as follows -

Code Blizard / Engineering and Agricultural/Terrence Fletcher
Lee Young/David Klantky
Mott Mac Donald/CEMCO
NEDICO-

Haskoning/SRKN/Engineering

Assessments were in progress at the end of the year

The PEU pointed out that it would be impractical for the IDB work to commence in Essequibo before the EC contract was finished, because of the bottleneck at the rock off-loading facilities and because of anticipated difficulties in working in Essequibo at the same time as the road construction. It was therefore agreed that the IDB contract works would have to commence in Corentyne

Delays in the start of IDB work could pose a problem with the disbursement of funds. The validity of the IDB loan has already been extended to October 1996. The Bank will require all money to have been with drawn no later than 16 months after that date (ie February 1998). Since this includes payment of retention money at the end of the period of maintenance, it means that the final section of work should be completed no later than December 1996.

Shorezone Management programme

The Government of Guyana has asked the IDB to finance a loan for the establishment of a Shorezone Management programme. The goal of the proposed programme is to assist in the resolution of shoreline management issues in an integrated and environmentally sound manner.

A Swedish team, Swedexplan-SSPA, was

selected to prepare a project design and feasibility study. The Government of Guyana appointed a Technical Working Group of members from various Government agencies involved in sea defence matters to assist and coordinate the Consultants during their study. The Project Director of the PEU served as chairman to this Group.

Members of the PEU have been involved in many ways with this project. The PEU has assisted Swedexplan in obtaining information and have commented on their strategies and alternative solutions. Swedexplan submitted their draft final report for comments by the Technical Working Group, and the report was then reviewed by other members of the PEU.

Members of the PEU attended a seminar held at the Georgetown Club on the 30th of November at which the findings of the Swedexplan team, as included in their final report, were presented and discussed.

Table 52 : IDB Sea Defence Project - East Coast Demerara - Tenders Received

TENDER	IDB SUM US\$000,000	IDB SUM US\$000	COST/m US\$
Boskalis	535		1700
Boskalis (alternative)	457		
Janin Sea Works	472		

Table 53 : Prepared Operation and Maintenance Budget for 1995

Particular	Amount G\$000
Staff	56,158
Rental of Equipment	182,250
Routine Maintenance	108,540
Emergency Maintenance	117,060
Contingency (10%)	46,400
Total	510,408

Table 54 : Adjusted Tenders

TENDERER	REDUCES TENDER SUM G\$ MILLION
PAC/Gelfi	1585
Kier	2339
Interbeton	2769
Mc Alpine	2942
TENDERER	REDUCED TENDER SUM G\$ MILLION
Bokalis	
- Complying	3060
- Alternative 1	2536
- Alternative 2	2260

Table 55 : Tenders Received

TENDERER	TENDERER SUM (G\$)
PAC/Gelfi spa Joint Venture	2,235,177,818
Kier International Ltd	3,045,021,934
Interbeton bv	3,622,278,999
Williams Mc Alpine/Nehaul Joint Venture	3,710,841,231
Bokalis Westminster Dredging bv	
- Complying	4,971,224,708
- Alternative 1	3,371,478,458
- Alternative 2	2,966,149,577

Table 56 : Project Areas for Possible EC Funding

AREA	LENGTH	COST US\$
Turkeyen/Industry, East Coast Demerara	1094 m	1,740,000
Cloonbrook/Greenfield, East Coast Demerara	800 m	2,000,000
Nismes/Le Retraite, West Bank Demerara	1041 m	2,000,000

BLACK BUSH POLDER REHABILITATION PROJECT

Administration

The Hydraulics Division - Ministry of Agriculture is the Principal Executing Agency and has the overall responsibility for all major activities undertaken within the Project Area.

The Project Manager is the official representative of the Hydraulics Division on the Project. The Project manager's ambit of operation includes the Force Account works and providing all guidance and assistance to the Contractor to ensure a smooth progression in the execution of the works. The Project Manager is accountable to the Chief Hydraulics Officer.

The financial sub-division of the Project is headed by the Office Manager, who is responsible for Co-ordinating all financial activities between the Ministry of Agriculture, Ministry of Finance and Project Management based at Tarlogie.

Force Account

As mentioned during the first half of 1994, construction works were concentrated on the following:-

- (a) Lesbeholden Main Drain
- (b) Lesbeholden South Collector Drains and Watercourses
- (c) Lesbeholden North Collector Drains and Watercourses

During the second half of 1994, construction works were concentrated on the following:-

- (a) Lesbeholden Main Drain
- (b) Lesbeholden North Distributary
- (c) Lesbeholden North Collector Drains and Watercourses.

Lesbeholden South Collector Drains and Watercourses

South Collector Drain 12/19 - 19,920 Lin.ft.

No. 22 RB dragline was assigned to this job. This job was completed before schedule and the machine was then moved to South Watercourse 18/19.

South Watercourse 18/19 - 6,240 Lin.ft.

No. 22 RB dragline was assigned to this job, which was completed before schedule despite the clearing of many trees and leveling done on both sides of the Embankment. The dragline was used since the project's Bulldozer was inoperable. The machine was then moved to South Collector Drain 17/18.

South Collector Drain 17/18 - 6,240 Lin.ft.

No. 22 RB dragline was assigned to this job, which was also completed before schedule and the machine then moved to South Watercourse 16/17.

South Watercourse 16/17 - 8,640 Lin.ft

No. 22 RB dragline was assigned to this job. This job was completed before schedule despite the clearing of many trees and leveling done on both sides of the Embankment. The dragline was used since the project's Bulldozer was inoperable. This machine was then moved to South Collector Drain 15/16.

South Collector Drain 15/16 - 6,240 Lin.ft.

No. 22 RB dragline was assigned, and this job was completed before schedule and the

machine was then moved to South Watercourse 14/15.

South Watercourse 14/15 - 5,280 Lin.ft.

No. 22 RB dragline was assigned to this job, which was completed before schedule despite the clearing of many trees and leveling done on both sides of Embankment. This was done due to the fact that the Project's Bulldozer was inoperable. This machine was then moved to South Collector Drain 8/9.

South Collector Drain 8/9 - 7,560 Lin.ft

No. 22 RB dragline was assigned to this job, which was previously done. Problems previously encountered were corrected and completed by the machine before the scheduled time. The machine was then taken to North Collector Drain 9/10.

Lebeholden North Collector Drains and Watercourses North Collector Drain 9/10 - 22,392 Lin.ft

No. 22 RB dragline was assigned to this job, which was completed after the scheduled time due to the fact that there were many trees on both sides of the Embankment which had to be cleared. It should be noted that a private Bulldozer was used to assist, since the Project's Bulldozer was inoperable. The machine was then taken to Collector Drain 11/12.

North Collector Drain 11/12 - 19,296 Lin. ft

No. 22 RB dragline was assigned, this job was completed on schedule.

A private Bulldozer was hired to assist clearing many trees on both sides of the Embankment. This was done due to the fact that the Project's Bulldozer was inoperable. The machine was then taken to the Southern side of the Main Drain.

North Collector Drain 7/8 - 19,488 Lin. ft

1 No Hymac Excavator was assigned to this job, which was completed on schedule. The machine was then moved to North Watercourse 8/9.

North Watercourse 8/9 21,190 Lin. ft

1 No Hymac Excavator was assigned to this job which was completed on schedule. The machine was then moved to North Collector Drain 5/6, North Collector Drain 5/6 - 15,912 Lin. ft.

1 No Hymac was assigned to this job which was completed on schedule. The machine was then moved to North Watercourse 6/7.

North Watercourse 6/7 19,600 Lin. ft

1 No Hymac Excavator was assigned to this job which was completed on schedule. This machine was then moved to North Collector Drain 4/5 where it experienced severe Mechanical problems and was taken to Tarlogie Compound for repairs.

North Watercourse 0/1 7,860 Lin. ft

1 No 22 RB Dragline was assigned to this job which was completed before the scheduled time. This was due to the fact that the Project's Bulldozer assisted in clearing trees and leveling, done on both sides of the Embankment. The machine was then moved to North Collector Drain 1/2.

North Collector Drain 1/2 - 8,184 Lin. ft

1 No 22 RB dragline was assigned to this job which was completed before the scheduled time. The machine was then moved to North Watercourse 2/3.

North Watercourse 2/3 - 10,210 Lin. ft

1 No 22 RB dragline was assigned to this job which was completed before the scheduled time. This was due to the fact that the Project's Bulldozer assisted in clearing trees and leveling, done on both sides of the Embankment. The machine was then taken to North Watercourse 4/5.

North Watercourse 4/5 8,575 Lin. ft

1 No 22 RB dragline was assigned to this job which was completed before the scheduled time. This was also due to the fact that the Project's Bulldozer assisted in clearing trees and leveling, done on both sides of the Embankment. The machine was then taken to North Watercourse 10/11.

North Watercourse 10/11 - 24,700 Lin. ft

1 No 22 RB dragline was assigned to this job which was completed before the scheduled time. This was due to the fact that the Project's Bulldozer assisted in clearing trees, widening and leveling the Embankment. The machine was then taken to the Main Drain to complete clearing and excavation on the Southern side. This machine was taken to Tarlogie Compound on the 2nd December, 1994.

Lesbeholden South Collector Drain 0/2 - 5,160 Lin. ft

No 22 RB dragline was assigned to this

job which was completed on schedule. This was due to the fact that the Project's Bulldozer assisted in clearing trees and leveling, done on both sides of the Embankment. The machine was then moved to South Watercourse 1/5.

Lesbeholden South Watercourse 1/2 3,000 Lin. ft

1 No 22 RB dragline was assigned to this job which was completed on schedule. This was due to the fact that the Project's Bulldozer assisted in clearing many trees and leveling done on both sides of the Embankment. The machine then continued clearing and excavating the Main Drain on both sides, from the Bucket-Head into North Collector Drain 3/4.

Lesbeholden North Collector Drain 3/4 12,048 Lin. ft

1 No 22 RB dragline was assigned to this job which was completed on schedule. This was due to the fact that the Project's Bulldozer assisted in clearing and leveling, done on both sides of the Embankment. This machine was then taken to Tarlogie Compound on the 2nd December, 1994.

Lesbeholden Main Drain and the Outfall Channel 92,422 Lin.ft

1 No 22 RB dragline was assigned to this job and construction works started at the Sluice and Junction of the main drain on the northern side. Progress at first appeared to be slow due to the fact that the operator had to clear and excavate the whole width of the main drain. This was necessary because there were a few bridges on the Southern embankment where the beams were cracked, hence, unsafe for a dragline to traverse on.

It should be noted that the machine was taken off its normal programme of excavation, to make a passage way for water to pass during the period when Lesbeholden was flooded. To date approximately 122% of the programmed works have been completed.

This also included the construction works done by the assigned Contractor on the outfall channel. This was done successfully by one 22 RB Dragline that was hired for the job from July 29 to August 11, 1994 in order to ease the flooding experienced in the area.

Contract Lesbeholden North Distributary

A Contract for the sum of \$592m allocated for the Rehabilitation of the Lesbeholden North Distributary was awarded. Due to extra excavation the said amount had to be adjusted to \$6,305m. Actual works started on the 19th November, 1993 and were completed satisfactory by the 20th February, 1994.

To date, the Contractor has completed

- (a) 86.0 Acres of Clearing
- (b) 82,296 Caddies of Excavation

Working on site were:

- (a) Mechanical crew
- (b) Survey Crew
- (c) 1 No Do Dozer
- (d) 2 No 22 RB Draglines

The cost of works to date is \$6,305,168M due to the fact that an additional Excavation of 12,296 cubic yards was necessary in order to complete the Distributary.

Mechanical Report - 1994

During this year the Hymac 14637 and Hymac 14638F were inoperable. Repairs were done to any broken machinery as early as possible. Even with a barely sufficient staff to maintain the equipment in working condition it is evident by the civil works completed that good organisation, prompt action and good standard of maintenance to equipment were carried out by the mechanical section. However, spare parts were unavailable to keep the Equipment working throughout the year. With the project Manager involved in all aspects of the work and his personal attention to

ensure transportation was available to get to the work site, downtime was significantly reduced. Acquisition of spares which was one of the major problems was given high priority. Often spares are obtained by the Project manager, sometimes on a weekly basis, from all parts of the country. Fabrication and substitution also played a high roles in the acquisition of spares. In this regard cognisance must be paid to staff recruited who performed in their specialist field as well as in other areas of activities to boost the speeding up of the works as a cohesive team.

Four main machines which are currently out of order are the 1150E Case Bulldozer and three 121B Hymac excavators. The bulldozer which requires major spares for the final drive had received its parts in May, 1994, and is operable. The excavators which required new hydraulic pumps each, should come into operation early 1995.

Repairs are also required for motor cycles and water pumps which are soon to be undertaken.

The Ford 3910 tractor which was out of operation for a number of years was repaired and handed over to IRP, Region No. 6.

Table 57 : Black Bush Polder Rehab Project :Staffing at 1994-12-31

POSITIONS	DESIGNATION
1	Project Manager
1	Office Manager - Vacant
1	Accountant
2	Accounts Clerk II
1	Confidential Secretary (ag)
1	Typist Clerk III
1	Store Keeper III - Vacant
1	Store Keeper II
1	Store Clerk -transferred to IRP
1	Survey Technician
3	Inspector-of-Works - Vacant
1	Tracer
1	Senior Mechanical Superintendent - Vacant
1	Workshop Foreman
1	Mechanic III
1	Auto Electrician
1	Mechanic I
2	Welder II
2	Vehicle Driver
1	Carpenter Foreman
1	Carpenter II
1	Outboard Operator - Vacant
6	Equipment Operator III
6	Servicemen
1	Security Foreman
21	Watchmen
1	Checker
1	Caretaker
1	Instrument-mnn
2	Linesmen
2	Laborer
1	Chnrwoman
69	

Table 58 : Black Bush Polder Rehab. Project : Summary of Work Done - Lesbeholden

Name of Canals	Lin Ft Planned	Lin Ft Achieved	% Planned	% Achieved	Remarks
Lesbeholden Main Drain C & E	52,821	64,442	100	122	This include the clearing and excavation of the outfall channel
Lesbeholden Main Drain C	28,000	28,000	100	100	
Lesbeholden South C/D 12/19 C & E	19,920	19,920	100	100	
Lesbeholden South C/D 8/9 C & E	7,560	7,560	100	100	
Lesbeholden South W/C 18/19 C & E	6,240	6,240	100	100	
Lesbeholden South C/D 17/18 C & E	6,240	6,240	100	100	
Lesbeholden South W/C 16/17 C & E	8,640	8,640	100	100	
Lesbeholden South 15/16 C & E	6,240	6,240	100	100	
Lesbeholden South W/C 14/15 C & E	5,280	5,280	100	100	
Lesbeholden South C/D 0/1 C & E	5,160	5,160	100	100	
Lesbeholden South 1/2 C & E	3,000	3,000	100	100	
Lesbeholden North C/D 11/12 C & E	19,296	19,296	100	100	
Lesbeholden North C/D 9/10 C & E	22,392	22,392	100	100	
Lesbeholden North C/D 7/8 C & E	19,488	19,488	100	100	
Lesbeholden North C/D 5/6 C & E	15,912	15,912	100	100	
Lesbeholden North 1/2 C & E	8,184	8,184	100	100	
Lesbeholden North C/D 3/4 C & E	12,048	12,048	100	100	
Lesbeholden North W/C 0/1 C & E	7,860	7,860	100	100	
Lesbeholden North W/C 2/3 C & E	10,210	10,210	100	100	
Lesbeholden North W/C 4/5 C & E	8,575	8,575	100	100	
Lesbeholden North W/C 6/7 C & E	17,600	17,600	100	100	
Lesbeholden North W/C 8/9 C & E	21,190	21,190	100	100	
Lesbeholden North W/C 10/11 C & E	24,700	24,700	100	100	

Table 59 : Black Bush Polder Rehab. Project : Plant and Machinery Serviceable and Unserviceable : Days for period 1st January to 1st December 1994

NAME	LOCATION	SERVICEABLE	UNSERVICEABLE
Ford Tractor # 14006	Tarlogie	355	10
Ford Tractor # 15209	Tarlogie	350	15
Ford Tractor No 15255	Tarlogie	345	20
22 RB Dragline DL 2	BBP/Tarlogie	345	20
22 RB Dragline DL 1	BBP/Tarlogie	331	34
Lighting Plant 75 KVA	N/Pump Station	306	59
Nissan Patrol PCC 9774	Tarlogie	273	92
Nissan Patrol PCC 9772	Tarlogie	253	112
Case Bulldozer 1150E	Tarlogie/BBP	183	182
Hymac 121B # 14640	BBP/Tarlogie	168	197
Bedford Lorry GCC 9364	Tarlogie	168	197
Suzuki Motor Cycle CB 8354	Tarlogie	155	210

NAME	LOCATION	SERVICABLE	UNSERVICABLE
Suzuki Motor Cycle CB 8352	Tarlogie	0	365
Suzuki Motor Cycle CB 8353	Tarlogie	0	365
Suzuki Motor Cycle CB 8355	Tarlogie	0	365
Suzuki Motor Cycle CB 8356	Tarlogie	0	365
Suzuki Motor Cycle CB 8357	Tarlogie	0	365
Suzuki Motor Cycle CB 8358	Tarlogie	0	365
Hymac 12113 # 14637	Tarlogie	0	365
Hymac 12113 # 14638	Tarlogie	0	365
Fordschritt Tractor # 15084	Tarlogie	0	365
Uniflote Pantoon	Tar:Corriverton Region # 6	0	365

Table 60 : Fuel Consumption for the period 1st Jan to 31st Dec. 1994

REGISTRATION #	MAKE	FUEL GLNS									LUBRICANT TPTS	IN LBS GREASE	PT DING BRAKE FLUID
		Gasoline	Diesel	#47	#46	#32	#40	#90	10W	OT			
PCC 9772	Nissan Patrol	8	1315	30	-	258	-	25	12	-	6	5	
PCC 9774	Nissan Patrol	-	1052	258	-	-	-	48	-	-	10	7	
PCC 9775	Nissan Patrol	2	1410	405	-	109	-	48	8	-	5	6	
PCC 9844		-	50	16	-	16	-	-	-	-	-		
PDD 2140		-	16	2	-	16	-	-	-	-	-		
PDD 2932	Toyota Pickup	16	-	8	-	-	-	-	-	-	-		
GCC 9364	Bedford Lorry	7	241	114	-	-	-	48	-	-	14	5	
CB 8354	Suzuki Motor Cycle	13	-	-	-	-	-	-	-	-	-		
O.B.40	Yamaha Engine	15	-	-	-	-	-	-	-	-	-		
BK 5450/205	Water Pump	109	-	40	-	-	-	-	-	-	-		
-	Lister Lighting Plant	-	94	44	-	8	-	16	-	-	2		
-	Lister Welding Pump	-	8	27	-	-	-	-	-	-	-		
TR 14006	Ford Tractor 3910	-	50	7	-	-	-	-	-	-	-		
TR 15209	Ford Tractor 5510	-	2018	302	-	-	-	74	-	-	8		
TR 15255	Ford Tractor 7810	-	336	114	-	-	-	-	8	-	8		
HY 14540	Hemas 121B	-	1966	198	32	-	870	48	-	-	100		
DL 1	22RB Dragline	7	3215	451	-	-	-	516	-	-	433		
DL 2	22RB Dragline	3	1631	196	-	638	72	353	-	-	365		
DL 4	22RB Dragline	-	140	16	-	-	-	64	-	-	50		
1150E	Case	32	1636	238	-	-	204	32	304	-	147		
936E	Front End Loader	-	150	48	-	-	-	16	64	-	-	3	
	Trailer	-	-	-	-	-	-	-	-	-	2		
	Miscellaneous	16	-	-	-	-	-	-	-	-	-		

EAST BANK ESSEQUIBO DEVELOPMENT PROJECT

Background

The East Bank Essequibo Development Project was identified as a follow-up to the IFAD Special Programming Mission that visited the country in May - June, 1982. Preparation of the proposed project was undertaken by the IFAD mission in 1985. The Government found, however, that the proposed total cost of the project, of approximately US\$ 19 million was too high and requested IFAD to reduce the size and cost of the project to more manageable level. This was done by an IFAD Post Appraisal Mission which visited the country in May - June 1986. The Post Appraisal Report dated July 7, 1986 embodies a project proposal costing US\$ 9 million.

The loan agreement was signed on November 20, 1986, and the commencement date of the project was July 8, 1987. This meant that the year 1990 represented the mid-term period for the project. As a result of this, a mid-term evaluation was carried out on the project during the first half of 1990.

The decisions taken on the mid-term evaluation formed the basis of the work being carried out on the project during the second half of the project implementation period. The supervision mission of March 1992 recommended an extension of the project if by one year, up to June 1993, as a result of various constraints encountered by the project, and this was approved. The completion date was further extended by one year, up to June 1994, however, a number of constraints confronted the project and the supervisory mission recommended a further extension of one year. The extension was granted to June 1995. The project continued to face a number of constraints that are impeding the rate of implementation, however, these are expected to be alleviated allowing the implementation to proceed relatively

smoother and quicker.

The following is a summary of some main features of the project:-

- 1) Duration Eight (8) years (96 months)¹
- 2) Date of Loan 20th November, 1989
- 3) Appointment of the Project Manager
1st January, 1987
- 4) Loan Effectiveness
8th July, 1987
- 5) Expected Closing date
30th June, 1995
- 6) Time already spent
90 months

¹ The Project Life was extended by 36 months 7)

Total Project Cost
IFAD (Foreign): US\$ 6.0 million
GOG (Local): US\$ 2.0 million
*OPEC: US\$ 1.0 million
*OPEC has so far not participated in the funding.

An assessment of the project status up to 1994 indicated that the implementation of the original project was about 87% completed, while the new area was 45% completed, as a result of various constraints. These constraints were mainly encountered in the early stages of the project, and were not overcome.

Project Objectives

The project aims at increasing the incomes and standard of living of a target group by increasing production and productivity through the following:-

- a) expanding the areas of the land under improved cultivation conditions by providing the necessary infrastructure and required means of production;
- b) modifying the cropping patterns by placing greater emphasis on higher valued crops and decreasing proportionately lower valued crops.

The target farmers were selected based on the following criteria:

- cultivation of a maximum of 15 acres of land
- annual household income not exceeding US\$ 1500
- at least 80% of the total income derived from agriculture

However, consequent on the recommendations of the mid-term evaluation, the project management reviewed the criteria for selection of target farmers, as follows:

- cultivation of a maximum of 20 acres of land
 - annual household income not exceeding US\$ 1,600
 - at least 80% of the total income derived from agriculture
- The loan agreement provides for a project with seven (7) parts. In addition, Development Support Communication component, an eight (8) element was added by the Government and was financed 100% from local funds. The components of the project are:-

- Part A: Rehabilitation of Infrastructure
- Part B: Procurement and Distribution of Farm Inputs

- Part C: Improvements to the Parika Marketing Center
- Part D: Agricultural Research, Extension and Training
- Part E: Technical Assistance
- Part F: Monitoring and Evaluation
- Part G: Support to Project Management
- Part H: Development Support Communication (DSC)

During 1993 the DSC component was absorbed by Project Management and therefore ceased to exist as an independent component.

Project Organization

The main implementing agency is the Regional Democratic Council (RDC). The project Management Unit (PMU) is within the RDC and carries out complete project programming and day-to-day management. The PMU is headed by a Project Manager. The Policy Coordinating Committee (PCC), establishes general policies and guidelines for project execution, under the chair of the Permanent Secretary of the Ministry of Agriculture. It ensures that the activities and decisions are compatible with local policies, and approves the annual work plan and budget of the project.

The following is a discussion of the results in the table.

Drainage & Irrigation

The project is to construct or rehabilitate 24 bridges, weed and desilt channels in Area 1 (North), construct and install 35 boxes, construct 9 check panels and repair 9 sluice gates. The project has also undertaken about 58 miles of trimming and shaping of irrigation canal embankment. However,

these figures represent the revised targets, based on the needs identified by the project, during its implementation.

In the new project area, the project is to carry out the clearing and excavation of 40.14 miles of drainage and irrigation channels, 17 miles of trimming and shaping of irrigation canal 4.5 miles of backfilling, construction of 10 boxes, 13 bridges, 6 check panels, 2 sluice gates, 2 concrete irrigation intakes and 1 concrete culvert.

Of these, in the initial project area, the project has completed 23 bridges, 100.4 miles of clearing and excavation, 23 boxes, 5 check panels, 9 sluice gates, and 49 miles of shaping and trimming embankments. In the new area, the project has carried out the clearing and excavation of 35 miles, constructed 6 green heart bridges and 2 greenheart box culvert. Thus, while about 87% of the work here has been completed in the initial project area, the proportion of work completed in the extended project area was 45%.

Feeder Roads:

The project is to repair and upgrade feeder roads by providing surfacing material, grading and compacting of 4 miles fair weather roads in Area 1 (North) and 0.5 miles all-weather roads in Area 111.

The project has completed all fair weather roads and 0.5 mile of the all weather road.

Rehabilitation of Pouderoyen of houses: This is about 100% completed, including the entrance road.

Construction/Rehabilitation of houses:

Two staff houses were scheduled to be completed. The project however rescheduled the construction of one and rehabilitated two houses. Also scheduled for

rehabilitation was the Crane mechanical workshop.

Under the project one house was constructed and two houses were rehabilitated as per schedule and the Crane workshop, was about 95% completed. All the physical works were finished, and the electrical wiring and installation of the transformer complete. The installation of the power tools are however outstanding.

Interim Rehabilitation Works

Manual and mechanical weeding and clearing of drainage canals were carried out as part of maintenance works four times for the year. While access dams were graded two times during the year.

Procuring and Distributing Small Farm Inputs:

The project is to improve production inputs, small equipment and spare parts for distribution by sale to project beneficiaries. Previously, inputs were procured through GNTC before the divestment of the company. Inputs are now procured from various established companies. At present, farmers purchase inputs from various sources, including the project outlets.

This component is about 91% completed.

Modifications to the Parika Marketing Center:

The project is to modify the Parika Marketing Center, to allow for storage of imported inputs to be distributed by the project. The project provided air-conditioning equipment and 2 large heavy duty tarpaulins and carried out some rehabilitation works in the center.

This component is about 100% completed.

MAJOR FEATURES / ACTIVITIES OF THE COMPONENTS AND THE CURRENT STATUS (in brief)

Table 61 : Status of the Civil Works Programme up to December 1994

ITEM	DESCRIPTION	UNIT	QUANTITY		TOTAL	ACHIEVED								TOTAL TO DATE	TO BE DONE IN 1995
			VERGENDEGEN / SALEM AREA	HAGUE / DEN AMSTEL AREA		1987	1988	1989	1990	1991	1992	1993	1994		
1	Clearing and Excavation	Miles	102.5	40.14	142.64	-	1.5	16.5	27	16	18.3	35	21.34	135.64	7
2	Trimming and shaping Irrigation Canal Embankment	Miles	58	17	75	-	-	-	-	-	-	24	24.8	48.8	26.2
3	Backfilling	Miles	2.5	4.5	7	-	-	-	-	-	-	-	-	-	7
4	Construct and Install Boxes	#	35	11	46	-	-	-	-	5	4	12	4	25	21
5	Construct/Rehabilitate bridges	#	24	13	37	-	-	-	5	3	4	9	8	29	8
6	Construct check Panels	#	9	6	15	-	-	-	-	-	1	2	2	5	10
7	Repair Sluice Gates	#	9	2	11	-	-	-	6	1	-	2	9	9	2
8	Building (Construct 1, Rehabilitate 2)	#	3	-	3	-	-	-	-	1	1	0.6	0.4	3	0
9	Modification of PMC	#	1	-	1	-	-	-	-	0.96	0.2	-	0.2	1	0
10	Roads	Miles													
	AWR - AREA 3		0.5	-	0.5	-	-	-	-	-	0.2	0.1	0.2	0.5	0
	FWR - AREA 1	Miles	4	-	4	-	-	-	-	3.5	0.5	-	-	4	0

Extension, Research and Training:

The project supports research activities in order to develop appropriate technology by upgrading the nursery in Vreced-en-Hoop. Farming systems and tissue culture programmes are also being carried out. These are carried out in close liaison with NARI. Tissue culture materials include pineapples, plantains, cassava and sweet potatoes.

This component is about 99% completed.

The other components perform the supportive roles and have continued to carry out such functions. The status of activities in these components are as follows:

Technical Assistance:

This embodies the provision of technical assistance for undertaking activities under the project, in the area of rural development, drainage and irrigation, mechanical engineering and other areas identified by project management.

Most of the services have been utilized and programmes undertaken. The component is deemed to be about 97% completed.

Monitoring and Evaluation:

The Monitoring and Evaluation Unit in the Planning Division of the Ministry of Agriculture undertakes the monitoring and evaluation of the project with the assistance of the Monitoring Officer at the project. Various activities in this area have been carried out to provide management with decision-making information and decide the progress of project implementation.

This component is assessed to be about 95% completed.

Support to Project Management:

This provides the technical and administrative direction to the work of the project. The component co-ordinates and ensures the implementation of the work programme, and carries out the day-to-day administration of the project. The activities implemented under this are deemed to have achieved 98% completion.

Overall Status of Project:

The cumulative relative achievement of the project was 89.7% and progress of implementation is about 89% completion at the end of 1994 (see Annex 1 A and 1 B). A graphical display of the overall progress of the project is shown in Annex 3 A, Annex 3 B and 3 C shows the graphical achievement of rehabilitation of infrastructure for Area 1 and Area 3 respectively.

Highlights of Major events and Activities in 1994

The project made some progress in the implementation of the work programme for the year. However, various constraints were encountered which affected the levels of achievement.

A summary of the major events and activities is as follows:

The project facilitated the activities of the IFAD/CDB Project Supervision Mission that visited the project from May 22-28, 1994 to assess the progress of the implementation. The aide memoir generally commended the efforts of the project and outlined some critical areas in need of attention. It was agreed that the extended closing date of June 30, 1994 was inadequate for the project to accomplish its scheduled targets as a result of several factors and a further extension to June 30, 1995 was recommended.

The project achieved 50% of the annual target in the reconstruction of bridges, 33% of the target in the construction of check panels, 50% of the target in the installation of sea sluice gates, 47% of its target for trimming and shaping and 100% of its target for all weather roads.

The project also completed about 75% of the annual target in the clearing and excavation of the drainage and irrigation channels.

Various training sessions for farmers were carried out during the year, these consisted of field tours, seminars, method demonstrations, group discussions, demonstration plots, etc.

The project conducted various farm visits and interviews, exceeding the annual target by up to 30 percentage points.

In collaboration with NARI and HCA, the project made satisfactory progress in the research programmes involving the monitoring of pests and diseases, production of certified seeds, management of moko disease, tissue culture, and farming systems. The annual target was achieved in each of these cases, except in the farming systems, where 50% of the annual target was achieved. The research on Neem as an insecticide was completed by NARI, a summary is in Annex 6.

Documentation of the agricultural technology adoption study, the effects of EBEIDP on its beneficiaries study, and project status from inception to December 1993 were completed. During the year, the project experienced difficulties in the execution of civil works, as a result of a break down in the tendering procedure and the non-performance of some contractors to execute certain types of work. These were the major constraints affecting the implementation of the annual work programme.

The PCC meetings were held, during which the activities of the project were reviewed

and policy issues addressed. The PCC has approved the work programmes of Rehabilitation of Infrastructure, Agricultural Extension, Research and Training, and Monitoring and Evaluation for 1995 (See Annex 7).

Adequate inputs were available throughout the year to farmers. However, with the trade liberalisation policy of the Government, farmers in the project area are purchasing inputs from other sources within the project area at competitive prices.

The yield rates of paddy, plantain, ground provisions, cabbage and pineapples have increased over that of 1993, ranging from 5.3 percentage points for ground provision to 8.5% for paddy.

The acreage cultivated has also increased over that of 1993, ranging from 13 percentage points for pineapple to 252 for plantains.

The project computerised their payroll system and stock register system.

The project handed over the completed works in AREA 1 NORTH, encompassed of 49 structures, comprising of bridges, sluices, culverts, tail escapes, check panels, head regulators, drainage and irrigation boxes; and 100.4 miles of drainage and irrigation channels, comprising of 6 main drains, 24 secondary drains, 2 main irrigation channels and 11 secondary irrigation channels, and in addition 10 pieces of various equipment to assist for maintenance (see Annex 5 A, 5 B and 5 C respectively for additional details).

The total acreage cultivated at the end of 1994 was 15588 acres.

In its phasing out process the project carried out a staff reduction exercise, reducing its staff from 150 to 73 in December 1994.

The IFAD Status of Fund statement was received, Statement of Expenditure showing Government of Guyana and IFAD

contribution and Statement of Local and Foreign Expenditure for the year 1994 was completed (see Annex 2 A, 2 B and 2 C for details).

The 1993 Annual Report was completed and sent to the relevant authorities.

Civil Works (Original Project Area)

During the year the project continued to carry out the programme of activities under this sub-component, through the contractors and force account. As a result of the limited equipment time, caused by the lack of adequate spare parts, bad weather conditions etc, much more work was rescheduled and included in works to be carried out by the contractors, to reduce the works to be executed by force account. The contractors continued to default with particular reference to meeting the deadline set for completion of works. The design of the works took quite a considerable proportion of the engineers' time. The cumulative effect of most of these constraints are yet to be overcome.

A CHANNELS

Clearing and Excavation of the annual target of cleaning and excavation of 2.44 miles, the project completed 34 miles, representing about 14% achievement. The total outstanding work stands at 2.1 miles which are to be cleaned and excavated. This facade drain has a wayleave problem. Residents occupied the area along this channel. The Regional Democratic Council (R.D.C.) and the residents of the area are currently sorting out this issue.

Trimming and Shaping the target for the trimming and shaping of irrigation canals was 33 miles, of this 23.8 miles were completed which represents 72% of the target for 1994. A total of 9.2 miles are outstanding.

Backfilling the target for backfilling was

1.5 miles. The project did not execute any work in this area because the check panels were not installed. This work is now programmed for 1995.

B STRUCTURES

i Construct and install Box fourteen (14) boxes were scheduled to be carried out during the period, but only two (2) were constructed. The achievement during this period was 14.3%. This leaves a total of 12 boxes to be constructed and installed in 1995.

ii Sluice Gates two sluice gates were completed as scheduled during the year. The level of achievement recorded here was 100%. All sluice have now been completed.

iii Check Panels the target set for 1994, was six (6), but only two (2) were completed. This represents an achievement of 33% as such there are 4 check panels outstanding.

iv Construction/Rehabilitation of Bridges the 1994 target for this sub-activity was three (3) bridges. Out of that number, 2 were constructed/rehabilitated, and thus the achievement was 67%.

With regards to this sub-component, the project was faced with two major constraints that impeded the rate of implementation, these are, the problem of identifying suitable contractors and the suspension of the regional tender board. The latter which proved to be the major constraint.

C BUILDINGS

i Rehabilitation of Crane Mechanical the electrical wiring and installation of the transformer was completed. The installation of the tools are outstanding. Achievement here during the year was 80% of the target. The electrical works are awaiting to be tested before the installation of tools can be commenced.

ii Repairs to House the project carried out works on the remaining house identified for rehabilitation. The achievement was 100%.

iii Rehabilitation of Pouderoyen Nursery the construction of the access road, which was identified the previous year, 1993, was completed.

D ROADS

The targeted 0.2 miles of all weather road was constructed as such the achievement was rated at 100%.

E OPERATION AND MAINTENANCE

The grading of 50 miles of access dam in the project area was the target and that was achieved, thus implying an achievement of 100%. Also the manual weeding of channels was scheduled four times in the year, but it was carried out three times which was 75% achievement.

Civil works (The New Project Area)

Rehabilitation works were started here in September 1993. During the year the project carried out its implementation activities. Partly, by contracts and by force accounts. The project faced a number of constraints with regards to contract awarding and identifying suitable contractors. Consequently, planned targets were not achieved and works were rescheduled for 1995.

A CHANNELS

i Clearing and Excavation the target set in this area was the cleaning and excavation of 35.4 miles of channels. Out of this, 30.5 miles were done representing 86% of the annual target. The total outstanding works are 4.9 miles.

ii Trimming and Shaping the target for trimming and shaping was 17 miles. No work was done due to problems

experienced with the procedures involved in awarding the contracts.

iii Backfilling the target was 4.45 miles. No work was done. The excavation was not completed as programmed.

B STRUCTURES

i Concrete Sea Sluice the target was 2 of which the contract was awarded and about 5% of the required work was completed.

ii Greenheart Bridges the planned target was 13 bridges of which 6 was completed or 46% achievement. The remaining 7 is programmed for 1995.

iii Greenheart Box Culvert the target was 8 of which 2 was completed or 25% achievement.

C ONGOING MAINTENANCE

The project graded and leveled 22 miles of access dams twice for the year, representing 100% achievement, and weeding and cleaning of 40 miles of channels.

However, reference should be made to section 2.3, for the overall status of activities in the new project area.

General Constraints : Rehabilitation of Infrastructure

1. The duration taken to award contracts sometimes extended beyond the validity period of the tender. Consequently, re-advertisement became necessary. Thus delayed implementation by a further 60 days or in some cases 6 months (after the irrigation season).
2. Some of the contractors were not reliable and thus, made limited progress.
3. The Regional Tender Board was suspended from March to September 1994. The performance

of the interim arrangement by, central tender board, was not satisfactory. The validity period expired before awards were made. Consequently, many tenders had to be advertised.

4. In some cases when awarded the contractor does not take the job, thus the whole process of awarding has to be performed again.

Procurement and Distribution of Farm Inputs

As a result of the trade liberalization and thus the removal of bottlenecks in the marketing system of agricultural inputs, many companies now procure inputs for sale to farmers in the country. Farmers in the project area, purchase inputs not only from project sources, but also other sources outside the project. About 500 farmers were said to have purchased one type of input or the other, during the reporting period. The total sales for the reporting period was GD \$3,386,604.00. The level of achievement recorded was estimated at 31%.

Rehabilitation of Parika Marketing center

During 1994, the project built a storeroom, thus, completing all outstanding works for this component. The component is now 100% completed.

Agriculture Research Extension And Training

See Table 63.

Farm Visits Three thousand (3,000) farm visits were scheduled during the year, and four thousand and fifty four (4054) field visits were conducted, achieving 135%. These visits were based mainly done to give advice to the farmers on the treatment of diseases, advice on weed control and vegetable cultivation, monitor

demonstration plots, crop production data and conduct general farm assessment

Informal Meetings Of the 25 scheduled informal meetings, 24 were held and this figure represents 96% achievement. The following areas were covered during these meetings: maintenance of drainage and irrigation facilities, grading access roads in rice areas for harvesting and crop production.

Preparation of Farm Plans During the year, fifty (50) farm plans were scheduled for completion, but the project was able to complete twenty-four (24). The achievement was 48%.

Recommendation of farmers for Credit The Project recommended thirty-six (36) farmers to GAIBANK and IPED during the year, to obtain production credit and to purchase agricultural machinery. The project based on their estimate had scheduled to recommend as many as fifty (50) farmers to these organisations, however, only 36 persons were interested and were recommend. Achieving on this instance 72% success.

The average achievement for this part was 150%.

B TRAINING

i Farmers' Training Sessions Farmers training sessions were undertaken in various forms.

- Seminars : Fourteen (14) seminars were organized as against the 12 planned. These seminars were on rice seed production, rice harvesting, vegetable and pineapple production.
- Field Day : Four (4) field days were organized compared to a target of 6. These field days were on weed control and improved crop management.

- Method Demonstration : Twenty (20) sessions on method demonstrations were planned, 16 were actually conducted. These were, weedicide trial on pineapple, selection of planting materials and vegetables production.

- Group Discussions : Seventy Six (76) group discussions were realised out of a planned number of One hundred (100). They were on integrated pest management, rice production, improved rice seed variety and fertilizer application.

i Staff Inservice Training Eight inservice training sessions were planned and conducted, achieving 100% success. These training sessions were aimed at refreshing the knowledge of the staff and motivating them. The training programme centered on crop husbandry and farm management practices, extension methods, plant protection and field inspection certification. The average achievement here was 87%.

C RESEARCH

In conjunction with NARI and IICA, the project carried out the following activities:

- (i) **Monitoring Pest and Disease:** This activity was carried out every week of the year (52 wks), as planned.
- (ii) **Production of Certified Rice Seeds:** Ten (10) plots were targeted plots, however, 30 plots were realised.
- (iii) **Management of Moko Disease:** This activity was successfully conducted on 2 plots as planned.
- (iv) **Variety trials rice:** This was carried out on 7 plots, 4 more than planned.
- (v) **Tissue culture:** This was carried

out on 8 plots, crops involved were pineapple and plantain. The annual target was achieved.

(vi) **Weed studies in pineapples:** It was targeted that this activity be carried out on 2 plots, which was achieved.

(vii) **Neem as an insecticide repellent in vegetables:** This was 100% successful as it was carried out on all four of the targeted plots. NARI has completed this research. The report is attached in Annex 6.

The average achievement for this sub-component was 119%.

The overall achievement of the activities under this component for this year, was 147%.

Technical Assistance

The project has computerised the inventory records, stock records and payroll system. This initiative has improved the efficiency of the project in these aspects.

Monitoring and Evaluation

Table 64 shows the Target and Achievements of the Monitoring and Evaluation Unit.

- 1 This component involved the continued updating of the target list, in collaboration with the staff of the Agricultural Research Extension and training.
- 2 The 1993 annual report was prepared and forwarded to the relevant agencies.
- 3 During the year, two surveys on Agricultural Technology Adoption and Effects of the East Bank Essequibo Development project on its Beneficiaries were conducted, the results were analyzed and two separate reports were produced.

4 A report on the project status, from inception to 1993 was completed and issued to the project management.

5 The monthly progress report on project activities was provided as support to project Management.

This component is assessed to have achieved 86% of the annual target.

Project Management

The project management continued to provide the technical and administrative direction and coordinated the work programmes of the various components of the project.

During the year, the project implementation period was extended by one year June 1995, by IFAD, based on the recommendations of the IFAD/CDB supervisory mission, which visited the project in May 1994.

The Project Coordinating Committee's (PCC) meetings were regularly held during the year, and various policy decisions were taken and implemented.

The project external communication system was maintained by telephone link, and by radio internally.

The cash flow was satisfactory throughout the year, and this provided adequate support to management in the implementation of activities.

In order to ensure a smooth take-over of the maintenance of the rehabilitated works by the Regional Government, a gradual involvement of the region in this area was initiated and the completed work in the initial project area was handed over to the Regional Authorities for operation and maintenance in December 1994. However, the project will still monitor and render assistance as necessary.

The special account held at the Bank of

Guyana, for the project, was not replenished during the year.

The total expenditure for the year was about 73% of the annual budget

The project purchased a number of equipment during the year, including a motor grader and a weed boat for grading access roads and cleaning drainage channels. (see Annex 7 for details).

This component was assessed to have recorded 80% achievement.6.0

Crop Yield and Area

Crop Yield

The project was designed to focus on the following principal crops :- Paddy, plantain, ground provision, cassava, black eye beans, cabbage and pineapple. Table 65 below presents the projected yield levels at full project development, for the crops, and actual levels achieved in 1991, 1992, 1993 and 1994.

Table 66 shows that the yield rates for the selected crops have increased, from base year to 1994. The 1994 yield rate of paddy increased by about 8.5 percentage points over the 1993 yield rate, 13% for 1992, 24% 1991 and 88% more than the base year.

The yield rates of plantain have also

increased, in 1994 the yield rate increased by 7.4 percentage points over 1993, and 120 percentage points over the base year yield rate.

The rate of ground provision has increased in 1994 by 5.3 percentage points more than the 1993 yield rate ,

14.3% over 1992 and 1991, and 80% over the base year.

There was no increased in the yield rate of cassava from 1993 to 1994, but 50% over

that of 1992 and 1991, and 125% over the base year.

Similarly, the yield rate for black-eye was the same for 1994, 1993, 1992, 1991. The rate was 150% over that of the base year.

The yield rate for cabbage has increased by 7% more than the 1993 rate, 88% more than the 1992, 200% over 1991 and 257% over the base year.

Pineapple yield rate was 7% more than that of 1993, 1992, 1991 and 181% for the base year.

All crops had respectively, exceeded the projected yield rates at full project development. Paddy exceeded this by 21.6%, plantain by 120%, ground provision by 81%, cassava by 41%, black-eye beans by 67%, cabbage by 138% and pineapple by 103%.

There are a number of factors that contributed to the high yield rates attained by farmers. These increases are believed to have resulted from the increased utilization of inputs - fertilizer and other chemicals, water, improved techniques, disease resistant varieties, good quality planting materials, extension service provided by the project and improved prices received by farmers and the adoption of high level of technology by farmers for various crops.

Crop Area

Table 66 indicates the total area cultivated by crop in 1991, 1992, 1993 and 1994, also the projected cropped areas at full project development and the base year.

In 1994 the table revealed an increase in acreage cultivated for all selected crops over the previous years. Paddy acreage has increased by 18% more than that of 1993, 1992, 43% for 1991 and 84% for the base year.

For plantain, increases over the previous years were 252% for 1993, 296% for 1992 and 88% for 1991.

The acreage for ground provision has also increase for 1993 by 143%, 164% for 1992 and 43% for 1991.

For cassava increases over the previous years were 208% for 1993, 179% for 1992 and 100% for 1991.

The increase in acreage of black-eye beans for 1994 as against that of previous years were 123% for 1993, 533% for 1992 and 93% for 1991.

The increase in acreage of Cabbages for 1994 as against that of previous years were 226% for 1993, 1140% for 1992 and 148% for 1991.

The increase in acreage of pineapples for 1994 as against that of previous years were 13% for 1993, 53% for 1992 and 22% for 1991.

The cropped area of paddy for 1994 compared with the base year and at full project development showed that area was 6.3% below the acreage at full development and 84% more than that of the base year. While for other crops (plantains, ground

provisions, cassavas, black-eye beans, cabbage and pineapples) the acreage were 6.7% less at full development and 882% more than the base year. The increase in The increase in paddy areas have been primarily due to the fact that more land was made cultivable by the project, through the rehabilitation works, and also, the relative profitability of the crop and the easier accessibility by farmers to agricultural machinery due to an increase in the number of machinery in the area. In the case of other crops, more land was made cultivable by pineapple the project, through the rehabilitation works, extension services and availability of agro-chemicals and also, the relative profitability of the crop

Conclusions and Recommendations

The Rehabilitation of Infrastructure was relatively poor when compared to the previous year. This was due to difficulties experienced with the awarding of contracts by the tender board.

The completion status of the original project area stands at 87%, even though it has lasted for 7.5 years. This relatively low percentage is believed to be as a result of the constraints which the project experienced, particularly during the early years of implementation. Approximately 45% of the total works scheduled for the new area has been completed.

The project manager needs more autonomy in order to achieve the planned target for 1995.

There were increases in yield rates of all crops during the year, except those of black eye beans and pineapple, whose yield rates did not change. These increases may have resulted from the adoption of high technology.

The project should put all efforts in completing all outstanding works, during the remaining period of project life, particularly the rehabilitation of infrastructure component, in order to enhance the farmers benefits.

Table 62 : East Bank Essequibo Development Project :
Achievements and Target of Civil Works for 1994

ITEM	DESCRIPTION	UNIT	ANNUAL TARGET		ACHIEVED IN 1994		PERCENTAGE ACHIEVED	
			VERGHEINGHEIN/SALEM AREA 1	HAGUE/DEN AMSTEL AREA 2	AREA 1	AREA 2	AREA 1	AREA 2
1	Clearing and excavation	miles	2.44	25.94	0.34	21.04	14	81
2	Trimming and shaping of embankment	miles	33	17	23.8		72	-
3	Construct and install boxes	No	14	8	2	2	14	25
4	Construct, rehabilitate bridges	No	2	13	2	6	100	46
5	Repair sluice gates	No	2	2	2	-	100	
6	Construct check panels	No	6	-	2		33	-
7	Buildings (construct 1, rehabilitate 2)	No	0.4	-	0.4		100	-
8	Modification of P.M.C.	No	0.2	-	0.2		100	-
9	Roads							
	All weather	Miles	-	0.2		0.2	-	100
	Fair Weather	Miles	0.0			-	-	-

Table 63 : Showing Targets and Achievements of Agricultural Extension Training and Research component.

NO.	ACTIVITY	TARGET	ACHIEVEMENT NIS	ACHIEVED %
A	AGRICULTURAL EXTENSION			
1	Update of Eligible Farmers	Continuously carried out in conjunction with the Monitoring and Evaluation component		
2	Interviews	4000	6582	165
3	Farm Visits	3000	4054	135
4	Conduct Informal Meetings	25	24	96
5	Prepare farm Plans	50	24	48
6	Recommendation to GAIBANK and IPED	50	36	72
7	Distribution of Inputs by sale to farmers	2500	1974	79
8	Conduct DSC sessions	24	20	83
B	TRAINING			
1	Conduct Farmers Training sessions:			
(a)	Seminars	12	14	117
(b)	Field Day	4	6	150
(c)	Method Demonstration	20	16	80
(d)	Group Discussions	100	76	76
(e)	Demonstration Plots	40	38	95
(f)	Farm Tours	3	4	113
2	Inservice Training	8	8	100
C	RESEARCH			
1	Monitoring Pest and Disease (Plots)	52	52	100
2	Production of Certified Rice Seeds (Plots)	10	30	100
3	Management of Moko disease (Plots)	2	2	100
4	Tissue Culture (weeks)	52	52	100
5	Variety rice trials (plots)	3	7	233
6	Weed studies in Pineapples (plots)	2	2	100
7	N neem as an insecticide repellent in vegetables (plots)	4	4	100

Table 64 : Target and Achievements of the Monitoring and Evaluation Unit.

NO.	ACTIVITY	TARGET	ACHIEVEMENTS	% AGE ACHIEVED	REMARKS
1	Update of target farmers list	1	1	100	Ongoing in conjunction with Agricultural extension unit.
2	Preparing 1993 Annual Report	1	1	100	Submitted to PCC, CDB, RDC and IFAD
3	Technology Adoption Study	1	1	100	Submitted to PCC, CDB, RDC and IFAD
4	Effects of EBEDP on beneficiaries study	1	1	100	Submitted to PCC, CDB, RDC and IFAD
5	Status of EBEDP from inception to December 1993	1	1	100	Submitted to Project Management
6	Monthly Progress Report for project	12	6	50	Submitted to Project Management, PCC and RDC
7	Monitoring Unit Monthly Report	12	7	60	Submitted to project Maangement
9	Quarterly Report	4	3	75	For M & E Unit
10	Cost of Product Study	1	75	75	Data collection and analysis completed
11	Farm Gate price Collection	Collected four times per month for selected crops			To be used in Farm income study.

Table 65 : Projected Yield levels and those achieved in 1991, 1992, 1993 and 1994 (Lb/Ac)

CROPS	Without Project Projection	Project Yld Rate for 6th year	1991 Yld Rate	1992 Yld Rate	1993 Yld Rate	1994 Yld Rate
Paddy (Rice)	2,700	4,700	4,100	4,500	4,700	5,100
Plantain	6,600	9,800	9,000	9,000	13,500	14,500
Ground Provision	4,400	7,000	7,000	7,000	7,600	8,000
Cassava	4,000	6,400	6,000	6,000	9,000	9,000
Black Eye Beans	400	600	1,000	1,000	1,000	1,000
Cabbage	4,200	6,300	5,000	8,000	14,000	15,000
Pineapple	5,700	7,900	15,000	15,000	15,000	16,000

Table 66 : Area Cultivated by Crop (Ac) (Projected, 1991, 1992, 1993 and 1994)

CROP	BASE YEAR	Projected Area (PCH and beyond)	1991	1992	1993	1994
Rice	1307.5	13,240	8,661	10,500	10,500	12,400
Plantain	324.5	3,415	330	165	186	654
Ground Provision			306	166	180	438
Cassava			891	640	580	1784
Black Eye Beans			59	18	50	114
Cabbage			25	5	19	62
Pineapples			111	89	120	136

Table 67 : Progress of Implementation Weighted by Total Expenditure .

COMPONENT	RELATIVE PROGRESS (%)	WEIGHT (%) USING TOTAL EXPENDITURE *	WEIGHTED PROGRESS
A (RI)	87	80.57	7009
B (SI)	91	2.85	298
C (PMC)	99	0.56	55
D (ARE)	99	5.0	495
E (TA)	97	0.17	17
F (ME)	95	1.42	135
G (PM)	98	9.43	924
Tntal		100.00	8894

*Weighted Index $8894/100 = 88.9\%$ using total expenditure as the weighting factor.

Table 68 : Details of Project Activities and Achievements in 1994
Overall Project Status as at December 31, 1994

Part of Project	DESCRIPTION	Weighting Factor	Cumulative % Completed (Physical)							Cumulative Relative Achievements (%)						
			1988	1989	1990	1991	1992	1993	1994	1988	1989	1990	1991	1992	1993	1994
A	Rehabilitation of Infrastructure (including purchase of equipment)	.51	14.5	32	45	65	62	78	87	7.4	16.3	23	33.2	31.6	39.8	44.42
B	Procurement and distribution of Farm Inputs	.26	14.5	31	31	50	71	82	91	3.7	8.0	8.0	13	18.5	21.3	23.7
C	Improvement to Panka Marketing Center	.01	90	98	98	98	98	98	99	0.9	1.0	1.0	1.0	1.0	1	1
D	Agricultural Research Extension and Training	.05	45	60	75	75	89	95	99	99	1.3	2.3	4.0	4.5	4.8	5.0
E	Technical Assistance	.07	19.5	45	60	76	88	94	97	1.4	3.1	4.2	5.3	6.2	6.6	6.8
F	Monitoring and Evaluation	.02	29.5	49	60	72	86	90	95	0.6	1.0	1.2	1.4	1.7	1.8	1.9
G	Project Management	.07	20	50	70	80	89	95	98	1.4	3.5	4.9	5.6	6.2	6.7	6.9
H	Development Support Communication	.01	20	50	70	79	82			2	0.5	0.7	0.8	0.8		
		1.00								16.9	35.7	46	64.4	70.5	81.93	89.7

3 Weighting factor based on the budget allocation to the component.

4 Separate weighting factor used for civil and other works respectively from the 1992 computation

AGRICULTURAL REHABILITATION PROGRAMME

The Loan Contract (No. 839/SF/GY) was signed on April 4, 1990 and declared available for disbursement in June 1991. Originally, the period of disbursement was for two (2) years, but was extended to December, 1994.

The overall objective of the programme is to provide the Government of Guyana with the foreign exchange resources necessary for the importation of agricultural inputs for the rice and sugar sub-sectors in order to reverse their decline in production and exports.

The total cost of the programme was budgeted at the equivalent of US\$30,100, with US\$14,200, being provided for inputs for the rice sub-sector, and US\$12,300 for the sugar sub-sector. By the end of 1994, practically all of the funds were disbursed. Funds generated from the sale of inputs brought in under the programme were deposited in a Special Account in the bank of Guyana to be used as Counterpart Funds

on IDB Projects. Up to end of 1994, some G\$3,351,902,042, were deposited in the Special Account.

Objectives

The main objective of this programme is to support the policy and institutional reforms introduced in the agricultural sector by removing institutional and infrastructure constraints to agricultural production.

The programme consists of the following three components:

- (a) The component of emergency repairs of approximately 10 miles of sea defence.
- (b) The upgrading and periodic maintenance of approximately 1,000 miles of farm access roads.
- (c) Design and implementation of institutional and policy reforms of the Sector Adjustment Component of the Agricultural Sector Hybrid

Programme.

The overall objectives of the programme has been achieved in that both the sugar and rice sub-sectors have achieved significant increases in production and exports.

The overall cost of the Project is US\$27,500.00. The contribution of IDB is US\$22m and GOG US\$5.5m, and period of disbursement - three years. By the end of 1994, only US\$637,088, were disbursed. There has been considerable delay in the start-up of the Project. The procurement activities conducted during the year related primarily to the procurement of Consultants and contractors, and implementation of an interim roads programme.

Table 69 shows Machinery and Equipment brought in under the programme. Other inputs made available through the programme include agrochemicals, fertilizers and spares.

**Table 69 : Agriculture Rehab. Programme :
Machinery and Equipment brought in under the programme for the sugar and rice sub-sectors**

Machinery and Equipment	Sugar	Rice
Tractors	146	243
Rice Combines	-	30
Implements	114	151
Motor Cycles	97	-
Trucks/Lorries	239	-
Pumps (Irrigators)	42	-
Excavators	13	-
Front-end-Loaders	9	-
Machinery and Equipment	Sugar	Rice
Motor Graders	2	-

Machinery and Equipment	Sugar	Rice
Trailers	14	4

Statistical Annex

Table 1

PRODUCTION OF SELECTED AGRICULTURAL COMMODITIES

COMMODITY	UNIT	1986	1987	1988	1989	1990	1991	1992	1993	1994
Rice	000 M/T	165.3	146.0	136.1	142.3	93.4	150.8	171.0	207.4	235.4
Sugar	000 M/T	249.4	224.5	170.2	167.4	132.0	162.5	246.9	246.5	256.7
Refined Oil	000 Gln	511.9	355.5	359.6	327.7	616.0	590.7	536.9	442.6	590.2
Coconuts	mill nuts	51.0	45.4	45.3	48.6	48.7	54.6	56.3	63.0	72.0
Peanuts	000 M/T	1.4	1.7	1.5	1.6	1.5	1.6	1.8	2.0	1.9
Other Legumes	000 M/T	1.5	1.0	1.0	1.0	1.0	0.9	0.9	0.9	1.0
Corn	000 M/T	1.8	2.9	2.9	3.0	3.0	3.1	3.2	3.5	3.3
Plantain	000 M/T	20.8	22.4	22.7	22.3	13.0	13.0	13.0	13.2	19.4
Ground Provisions	000 M/T	44.5	50.3	16.0	12.0	10.7	13.7	13.3	13.5	13.4
Cassava	000 M/T			23.6	25.8	21.8	31.6	30.8	30.1	29.2
Tomato	000 M/T	3.7	2.4	2.3	2.4	1.3	1.6	1.6	1.9	2.0
Cabbage	000 M/T	2.1	0.3	0.8	1.6	1.5	1.2	1.3	1.7	1.8
Citrus	000 M/T	13.2	11.0	7.4	5.4	6.4	6.4	7.2	7.6	7.6
Pineapple	000 M/T	5.3	7.9	9.9	11.2	7.6	6.5	8.8	9.5	10.1
Banana	000 M/T	17.4	9.5	14.2	15.8	12.7	12.8	13.3	13.6	16.1
Milk	mill Gln	6.2	6.9	7.6	7.8	8.3	8.5	8.6	8.6	8.7
Beef	000 M/T	1.7	1.8	2.0	2.4	2.2	3.0	4.2	3.8	4.6
Pork	000 M/T	1.1	1.1	1.1	1.0	0.9	0.9	0.6	1.1	0.5
Poultry meat	000 M/T	3.0	3.6	3.9	2.2	2.1	1.5	3.1	4.1	6.2
Table eggs	mill nos	49.9	35.0	14.0	30.4	13.4	5.3	7.3	8.5	16.5
Fish	000 M/T	33.8	32.8	31.5	32.5	33.0	36.1	37.1	37.2	
Shrimps/Prawn	000 M/T	6.3	6.2	6.2	6.4	5.1	6.4	6.0	6.1	

Table 2

RICE STATISTICS: 1968-1994

Year	Acreage Harvested (Acres)	Paddy Production (Tonnes)	Yield Tonne/acre	Average Yld 140 lbs bgs/acr	Rice Equiv(Mt) (Tonnes)	Quantity Exported	Value GS\$000 To 1991
1968	312,955	221,867	0.71	11.2	139,643	93,367	27,632.00
1969	279,309	173,329	0.62	9.8	112,664	62,243	19,147.00
1970	294,382	222,469	0.76	11.5	144,605	59,347	18,048.00
1971	233,542	187,535	0.80	12.6	121,898	67,515	21,334.00
1972	196,272	147,130	0.75	11.8	95,639	69,694	25,251.00
1973	229,268	152,360	0.66	10.5	99,034	47,814	25,005.00
1974	261,180	255,886	0.98	15.4	165,657	50,827	49,025.00
1975	267,961	297,099	1.11	16.2	172,259	82,035	84,837.00
1976	207,546	172,924	0.83	13.1	103,754	70,681	73,594.00
1977	322,405	358,290	1.11	17.5	214,972	65,855	66,812.00
1978	283,672	308,207	1.09	17.1	184,985	104,761	95,983.00
1979	222,863	240,556	1.08	17	144,328	84,080	80,814.00
1980	237,100	281,846	1.19	18.7	169,107	81,008	87,491.00
1981	219,962	276,006	1.25	19.7	165,604	78,010	110,009.00
1982	235,344	302,671	1.29	20.3	181,603	35,676	60,767.00
1983	187,243	246,064	1.31	20.6	147,639	41,715	64,933.00
1984	229,679	299,628	1.30	20.5	179,785	47,498	80,945.00
1985	192,110	260,207	1.35	21.3	156,124	29,339	56,594.00
1986	207,424	293,073	1.41	22.2	171,004	38,634	57,234.00
1987	185,611	243,398	1.31	20.6	145,879	68,987	157,128.00
1988	183,332	226,862	1.24	19.5	132,284	55,926	139,165.00
1989	169,303	237,183	1.40	22.1	142,310	40,575	367,427.00
1990	126,878	155,740	1.23	19.3	93,444	50,943	513,220.00
1991	188,237	251,321	1.34	21.3	150,793	54,047	2,102,635.00
1992	191,000	286,000	1.50	23.6	171,000	115,102	US\$ 35,000,135
1993	242,211	336,207	1.39	21.8	201,702	124,089	US\$ 3,045,277
1994	241,391	378,432	1.57	24.6	233,111	182,585	US\$ 55,547,061

Table 3

RICE : ACREAGE HARVESTED & PRODUCTION BY ZONES : 1992 - 1994

ZONE	Acres Harvested			Rice Prod (tonnes)			Acres Harvested			Rice Prod (tonnes)		
	1993	1992	%Change	1993	1992	% Change	1994	1993	%Change	1994	1993	% Change
REGION 2												
Essequibo Coast												
Spring	29,302	29,006	1.0	27,996	27,921	0.3	28,492	29,302	-2.8	27,188	27,996	-2.9
Autumn	28,525	28,305	-1.0	26,906	26,175	2.8	30,993	28,525	8.7	34,088	26,906	26.7
TOTAL	57,827	57,811	0.0	54,902	54,096	1.5	59,485	57,827	2.9	61,276	54,902	11.6
REGION 3												
Wakenaam Island												
Spring	859	869	-1.2	636	553	14.9	512	859	-40.4	405	636	-36.3
Autumn	799	820	-2.6	721	672	7.4	1,830	799	129.0	1,352	721	87.4
TOTAL	1,658	1,689	-1.8	1,357	1,225	10.8	2,342	1,658	41.3	1,757	1,357	29.5
Leguan Island												
Spring	1,990	1,596	24.7	1,391	611	127.7	1,302	1,990	-34.6	950	1,391	-31.7
Autumn	1,968	1,799	9.4	1,558	1,176	32.5	2,598	1,968	32.0	1,679	1,558	7.8
TOTAL	3,958	3,395	16.6	2,949	1,787	65.0	3,900	3,958	-1.5	2,629	2,949	-10.9
West Demerara												
Spring	9,954	9,892	0.6	9,850	9,760	0.9	9,427	9,954	-5.3	9,608	9,850	-2.5
Autumn	10,056	8,855	13.6	9,805	8,831	11.0	10,005	10,056	-0.5	9,994	9,805	1.9
TOTAL	20,010	18,747	6.7	19,655	18,591	5.7	19,432	20,010	-2.9	19,602	19,655	-0.3
REGION 4												
Spring	980	1,150	-14.8	807	1,026	-21.3	935	980	-4.6	839	807	3.9
Autumn	1,054	1,009	4.5	843	943	-10.6	1,009	1,054	177.4	909	843	7.8
TOTAL	2,034	2,159	-5.8	1,651	1,969	-16.2	3,859	2,034	89.7	1,748	1,651	5.9
Cane Grove												
Spring	2,983	2,945	1.3	2,514	2,505	0.4	2,924	2,983	-2.0	2,523	2,514	0.4
Autumn	3,131	2,862	9.4	2,740	2,902	-5.6	3,275	3,131	-4.6	3,016	2,740	10.1
TOTAL	6,114	5,807	5.3	5,254	5,407	-2.8	6,199	6,114	1.4	5,539	5,254	5.4

ZONE	Acres Harvested			Rice Prod (tonnes)			Acres Harvested			Rice Prod (tonnes)		
	1993	1992	%Change	1993	1992	% Change	1994	1993	%Change	1994	1993	% Change
REGION 5												
Mahaica Abary												
Spring	22,230	18,945	17.3	18,126	14,066	28.9	21,966	22,230	-1.2	19,363	18,126	6.8
Autumn	16,001	14,622	9.4	14,102	12,965	8.8	25,195	16,001	57.5	24,180	14,102	71.5
TOTAL	38,231	33,567	13.9	32,228	27,031	19.2	47,161	38,231	23.4	43,543	32,228	35.1
West Berbice												
Spring	32,167	20,157	59.6	25,090	14,146	77.4	23,362	32,167	-27.4	19,580	25,090	-22.0
Autumn	34,710	18,387	88.8	22,910	15,932	43.8	33,108	34,710	-4.6	29,846	22,910	30.3
TOTAL	66,877	38,544	73.5	48,000	30,078	59.6	56,470	66,877	-15.6	49,426	48,000	3.0
REGION 6												
Black Bush Polder												
Spring	16,007	13,287	20.5	13,054	11,678	11.8	11,156	16,007	-30.3	10,438	13,054	-20.0
Autumn	12,436	7,218	72.3	10,151	6,369	59.4	12,415	12,436	-0.2	10,952	10,151	7.9
TOTAL	28,443	20,505	38.7	23,205	18,047	28.6	23,571	28,443	-17.1	21,390	23,205	-7.8
Frontlands												
Spring	8,907	6,662	33.7	6,538	4,506	45.1	10,515	8,907	18.1	9,335	6,538	42.8
Autumn	16,391	12,442	31.7	11,643	8,240	41.3	19,495	16,391	18.9	19,107	11,643	64.1
TOTAL	25,298	19,104	32.4	18,181	12,746	42.6	30,010	25,298	19.6	28,442	18,181	56.4
Total Guyana												
Spring	125,379	104,509	20.0	106,002	86,772	22.2	10,591	125,379	-11.8	100,229	106,002	-5.4
Autumn	125,071	96,819	29.2	101,380	84,205	20.4	139,914	125,071	11.9	135,123	101,380	33.3
TOTAL	250,450	201,328	24.4	207,382	170,977	21.3	250,505	250,450	0.0	235,352	207,382	13.5

Table 4

RICE EXPORTS BY PRODUCT/DESTINATION: JAN-DEC, 1994 AND 1993

DESTINATION / PRODUCT	JANUARY TO DECEMBER, 1994				JANUARY TO DECEMBER, 1993			
	QTY	VALUE			QTY	VALUE		
	EXPORTED (M/T)	(US\$ 000)	(GS 000)	UNIT VALUE (US\$)	EXPORTED (M/T)	(US\$ 000)	(GS 000)	UNIT VALUE (US\$)
PADDY								
HOLLAND	220	40	4,990	180				
ITALY					6,383	1,179	148,546	185
JAMAICA	12	1	170	103				
SUB TOTAL	232	41	5,160	176	6,383	1,179	148,546	185
CARGO RICE								
JAMAICA	3,674	1,029	135,781	280				
BARBADOS					258	85	10,761	331
CURACO	49,992	17,052	2,259,032	341	21,489	7,177	896,595	334
ARUBA	14,441	4,856	646,962	336				
BONAIRE	32,301	11,139	1,477,661	345	19,239	7,096	888,950	369
TRINIDAD	1,077	359	48,098	333	3,515	992	124,801	282
TURKS & CAICOS	765	264	35,344	345				
ST VINCENT	2,025	687	89,523	335	1,503	438	55,238	292
MARTINIQUE	992	347	45,147	350	1,900	621	78,183	327
GUADELOUPE	650	228	30,485	350	500	144	18,176	289
HOLLAND	9,868	3,227	421,377	327	10,710	2,781	350,456	260
U.K.	16089	4921	644,649	306	7,901	2,393	301,285	303
PORTUGAL	4307	1,281	161,402	297	3,023	725	91,314	340
BELGIUM	10,509	3,409	450,238	324	5,134	1,540	194,075	300
ITALY	3,617	1,085	136,748	300	1,414	467	58,801	330
SPAIN	3,300	995	130,695	302				

DESTINATION / PRODUCT	JANUARY TO DECEMBER, 1994				JANUARY TO DECEMBER, 1993			
	QTY	VALUE			QTY	VALUE		
	EXPORTED (M/T)	(US\$ 000)	(G\$ 000)	UNIT VALUE (US\$)	EXPORTED (M/T)	(US\$ 000)	(G\$ 000)	UNIT VALUE (US\$)
U.K	837	120	15,446	143	1,240	201	25,351	162
SUB TOTAL	9,524	1,359	177,999	143	11,075	1,469	183,927	133
CARGO BROKEN								
HOLLAND	3,340	344	45,022	103	3,480	298	36,949	86
BELGIUM	2,105	232	30,461	110	1,500	135	17,010	90
JAMAICA					30	3	340	90
ST VINCENT	974	107	14,357	110	250	38	4,725	150
TRINIDAD	604	91	12,208	151	639	54	6,741	84
GRENADA	178	19	2,453	105				
SWEDEN					1,450	143	17,996	99
ARUBA	206	26	3,422	126				
CURACAO	5,110	506	66,502	99	5,931	474	59,784	80
BONAIRE	1,200	144	19,296	120				
SUB TOTAL	13,718	1,469	193,721	107	13,280	1,144	143,546	86
RICE BRAN								
TRINIDAD					749	30	3,763	41
SUB TOTAL								
TOTAL		55,547	7,327,862	304	124,090		4,144,466	266

DESTINATION / PRODUCT	JANUARY TO DECEMBER, 1994				JANUARY TO DECEMBER, 1993			
	QTY	VALUE			QTY	VALUE		
	EXPORTED (M/T)	(US\$ 000)	(G\$ 000)	UNIT VALUE (US\$)	EXPORTED (M/T)	(US\$ 000)	(G\$ 000)	UNIT VALUE (US\$)
SUB TOTAL	153,617	50,870	6,713,142	331	76,584	24,459	3,068,633	319
BROWN RICE								
CURACAO					18	9	1,162	525
PARBOILED CARGO								
BARBADOS					174	52	6,577	300
ST LUCIA					25	10	1,260	400
SUB TOTAL					199	62	7837	313
PACK WHITE RICE								
MARTINIQUE	560	217	28,802	388	40	14	1,714	340
SUB TOTAL	560	217	28,802	388	40	14	1,714	340
WHITE RICE								
JAMAICA	4,021	1,280	168,182	318	12,608	3,624	452,784	287
BARBADOS					201	66	8,358	330
ST LUCIA	500	184	24,646	368	811	289	36,142	356
CURACAO					2,021	659	83,024	326
ST VINCENT	350	105	13,230	300	121	40	5,031	330
DOMINICA	63	23	2,980	360				
SUB TOTAL	4,934	1,591	209,038	323	15,762	4,678	585,338	297
WHITE BROKEN								
HOLLAND	7,515	1,057	138,223	141	3,081	461	57,242	150
BELGIUM					2,465	325	40,924	132
MARTINIQUE	224	32	4,262	144	120	16	1,978	131
CURACAO	504	79	10,524	156	4,056	456	57,155	112
ONAIRE	428	68	9,168	160				
TRINIDAD	17	3	376	170	113	10	1,277	90

Table 5

RICE EXPORTS BY COUNTRIES / PRODUCT JAN-DEC: 1994 - 1993

DESTINATION / PRODUCT	JANUARY - DECEMBER, 1993				JANUARY - DECEMBER, 1993			
	QTY EXPORTED (MT)	VALUE		UNIT VALUE	EXPORTED	QTY (US\$000)	VALUE	UNIT
		(US\$ 000)	(GS 000)					
JAMAICA								
WHITE RICE	4,021	1,280	168,182	318	12,608	3,624	452,784	287
CARGO RICE	3,674	1,029	135,781	280				
CARGO BROKEN					30	3	340	90
PADDI	12	1	170	103				
SUB TOTAL	7,708	2,310	304,132	300	12,638	3,627	453,123	287
BARBADOS								
CARGO RICE								
PARBOILED					258	85	10,761	331
PARBOILED CARGO					174	52	6,577	300
WHITE RICE					201	66	8,358	330
SUB TOTAL					633	204	25,696	322
CURACAO								
CARGO RICE	49,992	17,052	2,259,032	341	21,489	7,177	896	334
BROWN RICE					18	9	1,162	525
WHITE RICE					2,021	659	83,024	326
WHITE BROKEN	504	79	10,524	156	4,056	425	57,155	112
CARGO BROKEN	5,110	506	66,502	99	5,931	474	59,784	80
SUB TOTAL	55,607	17,636	2,336,058	317	33,515	8,776	1,097,721	262

DESTINATION / PRODUCT	JANUARY - DECEMBER, 1993				JANUARY - DECEMBER, 1993			
	QTY EXPORTED (MT)	VALUE		UNIT VALUE	EXPORTED	QTY	VALUE	UNIT
		(US\$ 000)	(G\$ 000)			QTY (US\$000)		
BONAIRE								
CARGO RICE	32,301	11,139	1,477,661	345	19,239	7,096	888,950	369
WHITE BROKEN	428	68	9,168	160				
CARGO BROKEN	1,200	144	19,296	120				
SUB TOTAL	33,929	11,352	1,506,125	335	19,239	7,096	888,950	369
HOLLAND								
CARGO RICE	220	40	4,990	180				
WHITE BROKEN	9,868	3,227	421,337	327	10,710	2,781	350,456	260
CARGO BROKEN	7,515	1,057	138,223	141	3,081	461	57,242	150
RICE CHIPS	3,340	344	45,022	103	3,480	298	36,949	86
SUB TOTAL	20,944	4,668	609,611	223	17,272	3,540	444,646	205
BELGIUM								
CARGO RICE	10,509	3,409	450,238	324	5,134	1,540	194,075	300
CARGO BROKEN	2,105	232	30,461	110	1,500	135	17,010	90
WHITE BROKEN					2465	325	40924	132
SUB TOTAL	12,614	3,640	480,699	289	9,099	2,001	252,009	220
PORTUGAL								
CARGO RICE	4,307	1,281	161,402	297	3023	725	91341	240
U.K.								
CARGO RICE	16,098	4,921	644,649	306	7,901	2,393	301,285	303
WHITE BROKEN	837	120	446	143	1,240	201	23,351	162
SUB TOTAL	16,935	5,041	660,095	298	9,141	2,595	326,636	284
TRINIDAD								
CARGO RICE	1,077	359	48,098	333	3,512	992	124,801	282
WHITE BROKEN	17	3	376	170	113	10	1,277	90

DESTINATION / PRODUCT	JANUARY - DECEMBER, 1993				JANUARY - DECEMBER, 1993			
	QTY EXPORTED (MT)	VALUE		UNIT VALUE	EXPORTED	QTY	VALUE	UNIT
		(US\$ 000)	(GS 000)			QTY (US\$000)		
CARGO RICE	650	19	2,453	105				
ARUBA								
CARGO RICE	14,441	4,856	646,962	336				
CARGO BROKEN	206	26	3,422	126				
SUB TOTAL	14,648	4,882	650,385	333				
SPAIN								
CARGO RICE	3,300	995	130,695	302				
SWEDEN								
CARGO BROKEN	4,307	1,281	161,402	297	3023	725	91,314	240
DOMINICA								
WHITE RICE	63	23	2,980	360				
TURKS & CAICOS								
CARGO RICE	765	264	35344	345				
TOTAL	182,586	55,547	7,327,862	304	124,090	33,045	4,144,466	266

Table 6

SUGAR STATISTICS: 1980-1994

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994
Number of Factories	10	10	10	10	10	10	10	8	8	8	8	8	8	8	n.a.
Acreage Harvested	123,143	136,213	129,609	119,429	125,926	107,526	112,875	106,039	85,823	86,303	91,372	93,307	99,891	98,142	120,134
Tons Cane Milled ('000)	3,601	4,125	3,845	3,571	3,469	3,218	3,348	3,100	2,480	2,548	2,019	2,293	3,081	3,172	n.a.
Yield															
Tons Cane/Acre	29.24	30.28	29.67	29.9	27.54	29.93	29.66	29.23	28.9	29.56	22.1	24.57	30.84	32.31	n.a.
Tons Cane/Tons Sugar	13.35	13.71	13.36	14.18	14.34	13.24	13.64	14.03	14.8	15.41	15.54	14.36	12.68	13.07	n.a.
Tons Sugar/Acre	2.19	2.31	2.22	2.11	1.92	2.26	2.17	2.08	1.95	1.91	1.42	1.71	2.43	2.47	2.14
Production & Exports															
Sugar production (Tons)	269,634	300,790	287,725	251,870	241,861	243,000	245,440	220,995	167,550	164,800	129,920	159,690	243,010	242,640	256,657
Home Consumption: Sugar (Tons)	31,811	36,518	33,193	36,266	34,731	28,396	31,243	42,252	35,846	28,511	27,610	23,875	19,914	23,291	n.a.
Exports: Sugar (Tons)	236,344	262,855	252,542	213,227	205,371	214,543	213,609	176,463	134,828	160,979	129,767	159,430	232,711	219,093	n.a.
Sales															
Local (GSM)	9.7	11	9.9	10.7	26.7	40.4	50.3	68	58.3	173	406	1,049	984.06	1,143.12	n.a.
Average Price/Ton (GS)	394	301	295	195	769	1,422	1,610	1,610	1,626	6070	14,708	43,953	49,416	49,080	n.a.
Export (GSM)	296.7	285.8	258.8	212.1	271.5	286.6	356.7	971.7	710.2	2,309	3,265	75,105	15,965	14,971	n.a.
Average Price/Ton (GS)	1,255	1,087	1,025	994	1,322	1,336	1,670	5,506	5,267	14,348	25,167	75,105	68,604	68,336	n.a.
Expenditure															
Employment Costs (GSM)	174.2	196	189.3	185.7	201.9	184.3	207.6	294.2	302.9	515.1	980.5	2,703.70	4,873.10	6,041.00	n.a.
including Profit Share (GSM)															
(Materials and other (GSM)	106.2	126	115.2	104.5	137.3	171.3	186.5	295	306.2	984.1	1,780.71	5,892.42	6,954.94	6,415.60	n.a.
Operating Resulting Before															
Local Subsidy and Interest (GSM)	48.4	-5.3	-28.6	-59.1	-31.8	-22.1	-35.4	83.2	105	293.1	321.87	559.87	573.64	780.45	n.a.
Local Subsidy (GSM)	27.8	33.7	32.2	39.1	31.3	-	-	53.1	89.9	241.6	262.2	178.92	0	0	n.a.
Surplus (Deficit) before Tax (GSM)	6.2	-61.9	-93.2	-119.8	-102.3	-77.8	13.8	20.5	11.4	34.9	38.47	58.17	394.3	760.72	n.a.
Avg. Mid Market exchange rate GS/US\$	na	na	na	na	3.86	4.25	4.27	9.77	10	27.25	39	119.45	124.95	126.86	n.a.

Table 7

PRODUCTION, EXPORTS & IMPORTS OF RAW SUGAR: 1986 TO 1994

YEAR	PRODUCTION	EXPORTS		UNIT VALUE	IMPORTS
	(000 M/T)	(000 M/T)	(GS M)	(GS/TONNE)	(000 M/T)
(1)	(2)	(3)	(4)	(5)	(6)
1986	249.4	209.8	356.2	1,698	-
1987	224.5	187.0	910.8	4,871	-
1988	170.2	136.7	712.2	5,210	-
1989	167.4	170.0	2,342.0	13,776	26.0
1990	132.0	132.0	3,271.0	24,780	28.9
1991	162.5	150.0	11,418.0	76,120	23.0
1992	246.9	229.5	16,598.8	72,326	8.0
1993	245.5	236.8	15,120.0	63,863	0.0
1994	256.7	239.4	16,196.5	67,648	0.0

NOTE: There were no imports of raw sugar in 1993; however white sugar to the extent of 3,300 tonnes was imported

SOURCE: GUYSUCO

Table 8

SUGAR :BREAK-DOWN OF EXPORTS BY DESTINATION: 1994

DESTINATION	QTY EXPORTED	VALUE	UNIT VALUE
	(M/T)	(GS M)	(GS/ TONNE)
EEC	157,651	12,886.4	81,740
USA	14,345	855.9	59,630
WORLD MARKET	46,898	1,596.2	34,036
CARICOM	20,520	857.9	41,808
TOTAL	239,414	16,196.4	67,650

SOURCE: GUYSU/CO

Table 9

SUGAR : AREA HARVESTED, PRODUCTION AND YIELD

ESTATES	AREA HARVESTED			SUGAR PRODUCTION			SUGAR PRODUCTION PER HECTARE		
	Hectares			(M/T)			OUTPUT		M/T
	1994	1993	1992	1994	1993	1992	1994	1993	1992
SKELDON	4,815	4,050	4,396	30,568	28,438	29,923	6.35	7.02	6.81
ALBION	8,107	7,560	7,942	53,788	50,185	49,568	6.63	6.64	6.24
ROSE HALL	7,068	5,804	6,332	46,098	38,344	40,363	6.52	6.61	6.37
BLAIRMONT	5,149	4,470	5,027	37,714	33,330	37,497	7.33	7.46	7.46
Sub-Total: BERBICE	25,139	21,884	23,697	168,168	150,297	157,351	6.69	6.87	6.64
ENMORE	3,854	3,505	3,724	16,083	22,606	17,816	4.17	6.45	4.78
LBI	6,785	4,716	4,956	31,132	29,434	28,018	4.59	6.24	5.65
WALES	4,398	2,635	2,896	20,914	21,854	21,611	4.76	8.30	7.46
UITVLUGT/PL	4,319	3,612	3,914	20,359	22,332	22,114	4.71	6.18	5.65
Sub-total: DEMERARA	19,356	14,467	15,490	88,489	96,225	89,559	4.57	6.65	5.78
TOTAL GUYANA	34,858	36,351	39,187	256,657	246,522	246,910	5.77	6.78	6.30

Table 10

PRODUCTION AND DISPOSAL OF INDIGENOUS SUGAR IN GUYANA 1986 TO 1994 (in metric tons)

YEAR	OPENING STOCKS	PRODUCTION	TOTAL	EXPORTS	LOCAL DISAPPEARANCE	CLOSING STOCKS	IMPORTS	ESTIMATED DOMESTIC CONSUMPTION
			INDIGENOUS AVAILABILITY					
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1986	11,551	249,367	260,918	209,835	33,222	17,861	-	33,222
1987	17,861	224,531	242,392	187,035	43,008	12,349	-	43,008
1988	12,349	170,231	182,580	136,675	36,431	9,474	-	36,431
1990	3,551	131,999	135,550	132,059	985	2,506	28,866	29,851
1991	2,506	162,574	165,080	150,056	7	15,017	22,999	23,006
1992	14,427*	246,910	261,337	229,542	10,464	21,331	8,000	18,464
1993	21,329	246,522	267,842	236,757	21,770	9,315	0	21,770
1994	9,315	256,957	265,972	239,423	21,521	5,028	0	21,521

NOTE: Col (4) = Col (2) + Col (3) = Col (5) + Col (6) + Col (7) Col (9) = Col (6) + Col (8).

There was no import of raw sugar into Guyana during 1993. White sugar- about 3,300 tonnes was, however, imported. Closing stock at the end of 1991 (15,017MT) scaled down to (14,427) MT by Guysuco due to losses.

Table 11

PRODUCTION OF CROPS OTHER THAN RICE & SUGAR, BY REGIONS:1994

CROP	UNIT	REGION 1	REGION 2	REGION 3	REGION 4	REGION 5	REGION 6	REGION 7	REGION 8	REGION 9	REGION 10	TOTAL
Cereals & Legumes												
Corn	000lb	1,550.0	320.0	210.0	52.5	32.0	357.0	25.0	75.0	225.0	4,500.0	7,346.5
Blackeye	000lb	18.5	185.0	25.0	18.0	896.0	312.0	15.0	8.5	4.5	475.0	11,376.0
Minica	000lb	2.0	3.5	32.0	67.0	427.0	304.0	0.0	3.5	3.7	0.0	4,584.0
Other Legumes	000lb	5.0	0.0	30.0	25.0	129.0	-	4.9	30.0	0.0	425.0	533
Oilseeds												
Peanut	000lb	1,100.0	255.0	48.0	250.0	258.0	50.0	100.0	10.0	165.3	2,150.0	41,091.0
Coconut	000 no	6,100.0	19,500.0	12,250.0	3,715.0	18,293.1	11,325.0	0.0	0.0	0.0	800.0	71,983.1
Ground Provisions												
Cassava (S & B)	000lb	20,870.0	1,575.5	8,625.0	2,875.0	348.5	1,822.5	670.0	15,500.0	10,050.0	2,125.0	64,461.5
Sweet Potato	000lb	1,100.0	310.0	1,250.0	270.0	184.8	882.0			210.0	315.0	4,521.8
Eddoes	000lb	3,645.0	615.3	12,500.0	720.0	79.8	1,304.0		480.0			19,344.1
Yam	000lb	4,780.0	145.0	300.0	160.0							5,385.0
Tannia/dasheen	000lb	170.0	0.0	110.0	305.0							310.5
Plantain	000lb	1,500.0	1,850.0	30,000.0	1,980.0	616.80	5,925.0	625.0	95.0	75.0		42,666.8
Vegetables & Greens												
Tomato	000lb			638.0	712.0	401.8	2,720.0		0.7			4,472.5
Cabbage	000lb			480.0		522.0	3,062.0					4,064.0
Pumpkin	000lb		1,600.0	3,750.0	750.0	522.0	2,310.0	225.0				9,157.0
Bora	000lb			2,500.0	1,920.0	871.5	2,700.0	90.0				8,081.5
Ochro	000lb			1,200.0	1,240.0	264.7	2,340.0	20.0				5,064.7
Boulanger	000lb			1,500.0	1,194.0	325.7	3,348.0	30.0				6,397.7
Squash	000lb			500.0	1,595.0	252.9	704.0					3,051.9
Cucumber	000lb		250.0	300.0	1,541.0	550.0	725.0					3,366.0
Other Vegetables	000lb	250.0	120.0	950.0	1,146.0	1,550.0	1,600.0	1,200.0	12.5	75.0		6,903.5

Table 12

QUARTERLY PURCHASES OF FLUID MILK & PRODUCTION OF RECONSTITUTED MILK AT LIDCO:
1994 & 1993 (in gallons)

	1994	1993	% CHANGE	1994	1993	RECONSTITUTED MILK OUTPUT
1ST	28,842	21,717	32.8	17,001	28,172	-39.7
2ND	27,666	44,471	-37.8	14,336	9,995	43.4
3RD	21,778	45,528	-52.2	23,485	6,987	236.1
4TH	14,420	25,987	-44.5	27,916	25,913	7.7
TOTAL	92,706	137,702	-32.7	82,738	71,066	16.4

SOURCE : LIDCO

Table 13

**Total Exports of Non Traditional Agricultural Produce via Air and Seaports
during 1995 as compared to 1993 and 1994**

COMMODITY	EXPORT	EXPORT
	VOLUME	VOLUME
	(Tonnes)	(Tonnes)
	1993	1994
Achar	1.70	5.78
Awara	0.34	3.27
Avocado	0.00	3.68
Banana	0.00	1.17
Bilimbi	0.00	1.12
Bora	13.82	23.79
Boulanger	8.14	27.91
Breadfruit	0.01	2.30
Breadnut (katahar)	0.44	6.35
Cabbage	0.00	0.00
Calaloo (poi)	0.11	12.16
Cassava	0.00	0.94
Cassava bread	0.61	0.21
Cassava starch	0.00	4.14
Casareep	0.89	3.89
Carambola(fresh)	0.00	0.00
Carambola (psvd)	3.78	0.54
Carambola (juice)	0.00	0.00
Cashew	0.00	0.89
Cherry	0.00	0.00
Cherry pulp	0.00	0.00
Chichera	0.00	0.46
Corilla	0.02	1.05
Coconut (broom)	0.41	0.55
Coconut (dry)	24.74	6.99
Coconut (water)	0.00	0.00
Coconut shell powder	78.72	38.27
Coffee beans	5.81	40.88
Coffee ground	0.00	0.82
Copra	161.70	2,211.85

	EXPORT	EXPORT
COMMODITY	VOLUME	VOLUME
	(Tonnes)	(Tonnes)
	1993	1994
Achar	1.70	5.78
Cucumber	0.00	0.05
Dasheen	0.00	0.09
Dunks	0.43	2.81
Eddo	24.34	33.27
Eschallot	0.63	1.51
Flower/foilage	0.78	1.87
Genip	0.89	12.44
Ginger	0.28	1.76
Gooseberry	0.00	0.50
Golden apple	0.28	1.92
Grapefruit	0.43	1.07
Guava	0.00	0.11
Guava jam & jelly	8.44	23.30
Guava puree	0.00	0.00
Heart of Palm	940.90	1,218.69
Herbs (Medicinal)	0.33	0.92
Jackfruit (kowa)	0.05	3.25
Kuru	0.00	0.00
Lime	35.34	77.98
Mango	15.78	72.74
Mamey apple	0.71	4.54
Molasses	1.62	1.61
Ninwah	0.17	0.00
Ochro	0.29	7.27
Orange	18.02	2.05
Papaw	0.01	0.33
Passion fruit	0.00	0.46
Pea	0.00	0.15
Peanut	0.00	0.00
Pepper (hot)	9.76	21.57
Pepper (crushed)	0.00	1.29
Pepper (wiri wiri)	1.80	6.86

	EXPORT	EXPORT
COMMODITY	VOLUME	VOLUME
	(Tonnes)	(Tonnes)
	1993	1994
Achar	1.70	5.78
Pumpkin	7.52	80.38
Pineapple	402.95	374.85
Pineapple chunk/juice	120.28	41.25
Pineapple jam & jelly	3.69	7.75
Plantain	91.36	163.28
Plant parts	0.00	0.26
Psidium	0.10	0.81
Sapodilla	0.86	7.28
Saeme	1.93	13.35
Sijan	0.00	0.25
Somote●●	0.00	0.05
Sorrel (dried)	0.00	0.18
Spices	0.48	0.00
Squash	0.69	7.35
Starapple	0.08	0.80
Sweet basil	0.19	0.65
Sweet potato	0.00	8.54
Tangerine	4.73	3.12
Tamarind	0.20	0.35
Tea bush & bark	0.00	1.96
Thyme (dried)	0.19	0.96
Thyme (fresh)	0.00	0.33
Watermelon	0.00	0.14
Whitey	0.15	0.77
Yam	0.00	0.79
Others *	109.30	22.48
TOTAL EXPORTS	2,107	4,637

Note: Bank of Guyana Remittance calculated based on the average remittance rates for 1995 Rate used for US\$1.00 = G\$134.00
 * Others include unspecified fruits & vegetables and shipments of commodities which were under twenty-five (25) kgs.

Table 14

**TOTAL EXPORTS OF NON TRADITIONAL AGRICULTURAL PRODUCE
VIA AIR AND SEAPORTS (FRESH & PROCESSED)
JANUARY - DECEMBER 1994**

COMMODITY	EXPORT	EXPORT
	VOLUME	VOLUME
	(Tonnes)	(Tonnes)
	1993	1994
FRESH		
Awara	0.34	3.27
Avocado	0.00	3.68
Banana	0.00	1.17
Bilimbi	0.00	1.12
Bora	13.82	23.79
Boulangier	8.14	27.91
Breadfruit	0.01	2.30
Breadnut (katahar)	0.44	6.35
Cabbage	0.00	0.00
Calaloo (poi)	0.11	12.16
Cassava	0.00	0.94
Carambola(fresh)	0.00	0.00
Cashew	0.00	0.89
Cherry	0.00	0.00
Chiehera	0.00	0.46
Corilla	0.02	1.05
Cucumber	0.00	0.05
Dasheen	0.00	0.09
Dunks	0.43	2.81
Eddo	24.34	33.27
Eschallot	0.63	1.51
Flower/foilage	0.78	1.87
Genip	0.89	12.44
Ginger	0.28	1.76
Gooseberry	0.00	0.50
Golden apple	0.28	1.92
Grapefruit	0.43	1.07
Guava	0.00	0.11
Herbs (Medicinal)	0.33	0.92
Jackfruit (kowa)	0.05	3.25

COMMODITY	EXPORT	EXPORT
	VOLUME	VOLUME
	(Tonnes)	(Tonnes)
	1993	1994
FRESH		
Awara	0.34	3.27
Avocado	0.00	3.68
Kuru	0.00	0.00
Lime	35.34	77.98
Mango	15.78	72.74
Mamey apple	0.71	4.54
Ninwah	0.17	0.00
Ochro	0.29	7.27
Orange	18.02	2.05
Others *	109.30	22.48
Papaw	0.01	0.33
Passion fruit	0.00	0.46
Pea	0.00	0.15
Peanut	0.00	0.00
Pepper (hot)	9.76	21.57
Pepper (wiri wiri)	1.80	6.86
Pumpkin	7.52	80.38
Pineapple	402.95	374.85
Plantain	91.36	163.28
Plant parts	0.00	0.26
Psidium	0.10	0.81
Sapodilla	0.86	7.28
Sacme	1.93	13.35
Sijan	0.00	0.25
Sontoto	0.00	0.05
Spices	0.48	0.00
Squash	0.69	7.35
Starapple	0.08	0.80
Sweet basil	0.19	0.65
Sweet potato	0.00	8.54
Tangerine	4.73	3.12
Tamarind	0.20	0.35
Thyme (fresh)	0.00	0.33
Watermelon	0.00	0.14

COMMODITY	EXPORT	EXPORT
	VOLUME	VOLUME
	(Tonnes)	(Tonnes)
	1993	1994
FRESH		
Awara	0.34	3.27
Avocado	0.00	3.68
Whitey	0.15	0.77
Yam	0.00	0.79
Sub-total	753.74	1,026.44
PROCESSED		
Achar	1.70	5.78
Cassava bread	0.61	0.21
Cassava starch	0.00	4.14
Casareep	0.89	3.89
Carambola (psvd)	3.78	0.54
Carambola (juice)	0.00	0.00
Cherry pulp	0.00	0.00
Coconut (broom)	0.41	0.55
Coconut (dry)	24.74	6.99
Coconut (water)	0.00	0.00
Coconut shell powder	78.72	38.27
Coffee beans	5.81	40.88
Coffee ground	0.00	0.82
Copra	161.70	2,211.85
Guava jam & jelly	8.44	23.30
Guava puree	0.00	0.00
Heart of Palm	940.90	1,218.69
Molasses	1.62	1.61
Pepper (crushed)	0.00	1.29
Pineapple chunk/juice	120.28	41.25
Pineapple jam & jelly	3.69	7.75
Sorrel (dried)	0.00	0.18
Tea bush & bark	0.00	1.96
Thyme (dried)	0.19	0.96
Sub-total	1,353.48	3,610.91
TOTAL EXPORTS	2,107	4,637

Note: Bank of Guyana Remittance calculated based on the average remittance rates for 1995. Rate used for US\$1.00 = G\$134.00

*Others include unspecified fruits & vegetables and shipments of commodities which were under twenty-five (25) kgs.

Table 1

PRODUCTION OF SELECTED AGRICULTURAL COMMODITIES

COMMODITY	UNIT	1986	1987	1988	1989	1990	1991	1992	1993	1994
Rice	000 M/T	165.3	146.0	136.1	142.3	93.4	150.8	171.0	207.4	235.4
Sugar	000 M/T	249.4	224.5	170.2	167.4	132.0	162.5	246.9	246.5	256.7
Refined Oil	000 Gln	511.9	355.5	359.6	327.7	616.0	590.7	536.9	442.6	590.2
Coconuts	mill nuts	51.0	45.4	45.3	48.6	48.7	54.6	56.3	63.0	72.0
Peanuts	000 M/T	1.4	1.7	1.5	1.6	1.5	1.6	1.8	2.0	1.9
Other Legumes	000 M/T	1.5	1.0	1.0	1.0	1.0	0.9	0.9	0.9	1.0
Corn	000 M/T	1.8	2.9	2.9	3.0	3.0	3.1	3.2	3.5	3.3
Plantain	000 M/T	20.8	22.4	22.7	22.3	13.0	13.0	13.0	13.2	19.4
Ground Provisions	000 M/T	44.5	50.3	16.0	12.0	10.7	13.7	13.3	13.5	13.4
Cassava	000 M/T			23.6	25.8	21.8	31.6	30.8	30.1	29.2
Tomato	000 M/T	3.7	2.4	2.3	2.4	1.3	1.6	1.6	1.9	2.0
Cabbage	000 M/T	2.1	0.3	0.8	1.6	1.5	1.2	1.3	1.7	1.8
Citrus	000 M/T	13.2	11.0	7.4	5.4	6.4	6.4	7.2	7.6	7.6
Pineapple	000 M/T	5.3	7.9	9.9	11.2	7.6	6.5	8.8	9.5	10.1
Banana	000 M/T	17.4	9.5	14.2	15.8	12.7	12.8	13.3	13.6	16.1
Milk	mill Gln	6.2	6.9	7.6	7.8	8.3	8.5	8.6	8.6	8.7
Beef	000 M/T	1.7	1.8	2.0	2.4	2.2	3.0	4.2	3.8	4.6
Pork	000 M/T	1.1	1.1	1.1	1.0	0.9	0.9	0.6	1.1	0.5
Poultry meat	000 M/T	3.0	3.6	3.9	2.2	2.1	1.5	3.1	4.1	6.2
Table eggs	mill nos	49.9	35.0	14.0	30.4	13.4	5.3	7.3	8.5	16.5
Fish	000 M/T	33.8	32.8	31.5	32.5	33.0	36.1	37.1	37.2	
Shrimps/Prawn	000 M/T	6.3	6.2	6.2	6.4	5.1	6.4	6.0	6.1	

Table 2

RICE STATISTICS: 1968-1994

Year	Acreage Harvested (Acres)	Paddy Production (Tonnes)	Yield Tonne/acre	Average Yld 140 lbs hgs/acr	Rice Equiv(Mt) (Tonnes)	Quantity Exported	Value GS'000 To 1991
1968	312,955	221,867	0.71	11.2	139,643	93,367	27,632.00
1969	279,309	173,329	0.62	9.8	112,664	62,243	19,147.00
1970	294,382	222,469	0.76	11.5	144,605	59,347	18,048.00
1971	233,542	187,535	0.80	12.6	121,898	67,515	21,334.00
1972	196,272	147,130	0.75	11.8	95,639	69,694	25,251.00
1973	229,268	152,360	0.66	10.5	99,034	47,814	25,005.00
1974	261,180	255,886	0.98	15.4	165,657	50,827	49,025.00
1975	267,961	297,099	1.11	16.2	172,259	82,035	84,837.00
1976	207,546	172,924	0.83	13.1	103,754	70,681	73,594.00
1977	322,405	358,290	1.11	17.5	214,972	65,855	66,812.00
1978	283,672	308,207	1.09	17.1	184,985	104,761	95,983.00
1979	222,863	240,556	1.08	17	144,328	84,080	80,814.00
1980	237,100	281,846	1.19	18.7	169,107	81,008	87,491.00
1981	219,962	276,006	1.25	19.7	165,604	78,010	110,009.00
1982	235,344	302,671	1.29	20.3	181,603	35,676	60,767.00
1983	187,243	246,064	1.31	20.6	147,639	41,715	64,933.00
1984	229,679	299,628	1.30	20.5	179,785	47,498	80,945.00
1985	192,110	260,207	1.35	21.3	156,124	29,339	56,594.00
1986	207,424	293,073	1.41	22.2	171,004	38,634	57,234.00
1987	185,611	243,398	1.31	20.6	145,879	68,987	157,128.00
1988	183,332	226,862	1.24	19.5	132,284	55,926	139,165.00
1989	169,303	237,183	1.40	22.1	142,310	40,575	367,427.00
1990	126,878	155,740	1.23	19.3	93,444	50,943	513,220.00
1991	188,237	251,321	1.34	21.3	150,793	54,047	2,102,635.00
1992	191,000	286,000	1.50	23.6	171,000	115,102	US\$ 35,000,135
1993	242,211	336,207	1.39	21.8	201,702	124,089	US\$ 3,045,277
1994	241,391	378,432	1.57	24.6	233,111	182,585	US\$ 55,547,061

ZONE	Acres Harvested			Rice Prod (tonnes)			Acres Harvested			Rice Prod (tonnes)		
	1993	1992	%Change	1993	1992	% Change	1994	1993	%Change	1994	1993	% Change
REGION 5												
Mahaica Abary												
Spring	22,230	18,945	17.3	18,126	14,066	28.9	21,966	22,230	-1.2	19,363	18,126	6.8
Autumn	16,001	14,622	9.4	14,102	12,965	8.8	25,195	16,001	57.5	24,180	14,102	71.5
TOTAL	38,231	33,567	13.9	32,228	27,031	19.2	47,161	38,231	23.4	43,543	32,228	35.1
West Berbice												
Spring	32,167	20,157	59.6	25,090	14,146	77.4	23,362	32,167	-27.4	19,580	25,090	-22.0
Autumn	34,710	18,387	88.8	22,910	15,932	43.8	33,108	34,710	-4.6	29,846	22,910	30.3
TOTAL	66,877	38,544	73.5	48,000	30,078	59.6	56,470	66,877	-15.6	49,426	48,000	3.0
REGION 6												
Black Bush Polder												
Spring	16,007	13,287	20.5	13,054	11,678	11.8	11,156	16,007	-30.3	10,438	13,054	-20.0
Autumn	12,436	7,218	72.3	10,151	6,369	59.4	12,415	12,436	-0.2	10,952	10,151	7.9
TOTAL	28,443	20,505	38.7	23,205	18,047	28.6	23,571	28,443	-17.1	21,390	23,205	-7.8
Frontlands												
Spring	8,907	6,662	33.7	6,538	4,506	45.1	10,515	8,907	18.1	9,335	6,538	42.8
Autumn	16,391	12,442	31.7	11,643	8,240	41.3	19,495	16,391	18.9	19,107	11,643	64.1
TOTAL	25,298	19,104	32.4	18,181	12,746	42.6	30,010	25,298	19.6	28,442	18,181	56.4
Total Guyana												
Spring	125,379	104,509	20.0	106,002	86,772	22.2	10,591	125,379	-11.8	100,229	106,002	-5.4
Autumn	125,071	96,819	29.2	101,380	84,205	20.4	139,914	125,071	11.9	135,123	101,380	33.3
TOTAL	250,450	201,328	24.4	207,382	170,977	21.3	250,505	250,450	0.0	235,352	207,382	13.5

Table 3

RICE : ACREAGE HARVESTED & PRODUCTION BY ZONES : 1992 - 1994

ZONE	Acres Harvested			Rice Prod (tonnes)			Acres Harvested			Rice Prod (tonnes)		
	1993	1992	%Change	1993	1992	% Change	1994	1993	%Change	1994	1993	% Change
REGION 2												
Essequibo Coast												
Spring	29,302	29,006	1.0	27,996	27,921	0.3	28,492	29,302	-2.8	27,188	27,996	-2.9
Autumn	28,525	28,805	-1.0	26,906	26,175	2.8	30,993	28,525	8.7	34,088	26,906	26.7
TOTAL	57,827	57,811	0.0	54,902	54,096	1.5	59,485	57,827	2.9	61,276	54,902	11.6
REGION 3												
Wakenaam Island												
Spring	859	869	-1.2	636	553	14.9	512	859	-40.4	405	636	-36.3
Autumn	799	820	-2.6	721	672	7.4	1,830	799	129.0	1,352	721	87.4
TOTAL	1,658	1,689	-1.8	1,357	1,225	10.8	2,342	1,658	41.3	1,757	1,357	29.5
Leguan Island												
Spring	1,990	1,596	24.7	1,391	611	127.7	1,302	1,990	-34.6	950	1,391	-31.7
Autumn	1,968	1,799	9.4	1,558	1,176	32.5	2,598	1,968	32.0	1,679	1,558	7.8
TOTAL	3,958	3,395	16.6	2,949	1,787	65.0	3,900	3,958	-1.5	2,629	2,949	-10.9
West Demerara												
Spring	9,954	9,892	0.6	9,850	9,760	0.9	9,427	9,954	-5.3	9,608	9,850	-2.5
Autumn	10,056	8,855	13.6	9,805	8,831	11.0	10,005	10,056	-0.5	9,994	9,805	1.9
TOTAL	20,010	18,747	6.7	19,655	18,591	5.7	19,432	20,010	-2.9	19,602	19,655	-0.3
REGION 4												
Spring	980	1,150	-14.8	807	1,026	-21.3	935	980	-4.6	839	807	3.9
Autumn	1,054	1,009	4.5	843	943	-10.6	1,000	1,054	177.4	909	843	7.8
TOTAL	2,034	2,159	-5.8	1,651	1,969	-16.2	3,859	2,034	89.7	1,748	1,651	5.9
Cane Grove												
Spring	2,983	2,945	1.3	2,514	2,505	0.4	2,924	2,983	-2.0	2,523	2,514	0.4
Autumn	3,131	2,862	9.4	2,740	2,902	-5.6	3,275	3,131	4.6	3,016	2,740	10.1
TOTAL	6,114	5,807	5.3	5,254	5,407	-2.8	6,199	6,114	1.4	5,539	5,254	5.4

DESTINATION / PRODUCT	JANUARY TO DECEMBER, 1994				JANUARY TO DECEMBER, 1993			
	QTY	VALUE			QTY	VALUE		
	EXPORTED (M/T)	(US\$ 000)	(G\$ 000)	UNIT VALUE (US\$)	EXPORTED (M/T)	(US\$ 000)	(G\$ 000)	UNIT VALUE (US\$)
CURACAO					18	9	1,162	525
PARBOILED CARGO								
BARBADOS					174	52	6,577	300
ST LUCIA					25	10	1,260	400
SUB TOTAL					199	62	7837	313
PACK WHIT RICE <i>white</i>								
MARTINIQUE	560	217	28,802	388	40	14	1,714	340
SUB TOTAL	560	217	28,802	388	40	14	1,714	340
WHITE RICE								
JAMAICA	4,021	1,280	168,182	318	12,608	3,624	452,784	287
BARBADOS					201	66	8,358	330
ST LUCIA	500	184	24,646	368	811	289	36,142	356
CURACAO					2,021	659	83,024	326
ST VINCENT	350	105	13,230	300	121	40	5,031	330
DOMINICA	63	23	2,980	360				
SUB TOTAL	4,934	1,591	209,038	323	15,762	4,678	585,338	297
WHITE BROWN RICE <i>white</i>								
HOLLAND	7,515	1,057	138,223	141	3,081	461	57,242	150
BELGIUM					2,465	325	40,924	132
MARTINIQUE	224	32	4,262	144	120	16	1,978	131
CURACAO	504	79	10,524	156	4,056	456	57,155	112
BONAIRE	428	68	9,168	160				
TRINIDAD	17	3	376	170	113	10	1,277	90
U.K	837	120	15,446	143	1,240	201	25,351	162
SUB TOTAL	9,524	1,359	177,999	143	11,075	1,469	183,927	133

DESTINATION / PRODUCT	JANUARY TO DECEMBER, 1994				JANUARY TO DECEMBER, 1993			
	QTY	VALUE			QTY	VALUE		
	EXPORTED (MT)	(US\$ 000)	(GS 000)	UNIT VALUE (US\$)	EXPORTED (MT)	(US\$ 000)	(GS 000)	UNIT VALUE (US\$)
CARGO BRKN <i>Basket</i>								
HOLLAND	3,340	344	45,022	103	3,480	298	36,949	86
BELGIUM	2,105	232	30,461	110	1,500	135	17,010	90
JAMAICA					30	3	340	90
ST VINCENT	974	107	14,357	110	250	38	4,725	150
TRINIDAD	604	91	12,208	151	639	54	6,741	84
GRENADA	178	19	2,453	105				
SWEDEN					1,450	143	17,996	99
ARUBA	206	26	3,422	126				
CURACAO	5,110	506	66,502	99	5,931	474	59,784	80
BONAIRE	1,200	144	19,296	120				
SUB TOTAL	13,718	1,469	193,721	107	13,280	1,144	143,546	86
RICE BRAN								
TRINIDAD					749	30	3,763	41
SUB TOTAL								
TOTAL		55,547	7,327,862	304	124,090		4,144,466	266

Table 5

RICE EXPORTS BY COUNTRIES / PRODUCT JAN-DEC: 1994 - 1993

DESTINATION / PRODUCT	JANUARY - DECEMBER, 1993				JANUARY - DECEMBER, 1993			
	QTY EXPORTED (MT)	VALUE		UNIT VALUE	EXPORTED	QTY	VALUE	UNIT
		(US\$ 000)	(GS 000)					
JAMAICA								
WHITE RICE	4,021	1,280	168,182	318	12,608	3,624	452,784	287
CARGO RICE	3,674	1,029	135,781	280				
CARGO BRKN					30	3	340	90
PADDI	12	1	170	103				
SUB TOTAL	7,708	2,310	304,132	300	12,638	3,627	453,123	287
BARBADOS								
CARGO RICE								
PARBOILED					258	85	10,761	331
PARBOILED CARGO					174	52	6,577	300
WHITE RICE					201	66	8,358	330
SUB TOTAL					633	204	25,696	322
CURACAO								
CARGO RICE	49,992	17,052	2,259,032	341	21,489	7,177	896	334
BROWN RICE					18	9	1,162	525
WHITE RICE					2,021	659	83,024	326
WHITE BRKN	504	79	10,524	156	4,056	425	57,155	112
CARGO BRKN	5,110	506	66,502	99	5,931	474	59,784	80
SUB TOTAL	55,607	17,636	2,336,058	317	33,515	8,776	1,097,721	262
BONAIRE								
CARGO RICE	32,301	11,139	1,477,661	345	19,239	7,096	888,950	369
WHITE BRKN	428	68	9,168	160				
CARGO BRKN	1,200	144	19,296	120				

DESTINATION / PRODUCT	JANUARY - DECEMBER, 1993				JANUARY - DECEMBER, 1993			
	QTY EXPORTED (MT)	VALUE		UNIT VALUE	EXPORTED	QTY	VALUE	UNIT
		(US\$ 000)	(GS 000)			QTY (US\$000)		
WHITE RICE	500	184	24,646	368	811	289	36,142	356
P B RICE					25	10	1,260	400
SUB TOTAL	500	184	24,646	368	836	299	37,402	357
St VINCENT								
WHITE RICE	350	105	13,230	300	121	40	5,031	330
CARGO RICE	2,025	678	89,523	335	1,503	438	55,238	292
CARGO BRKN	974	107	14,357	110	250	38	4,725	150
SUB TOTAL	3,349	890	117,110	266	1,874	516	64,994	275
SWEDEN								
CARGO BRKN					1,450	143	17,996	99
ITALY								
PADI					6,383	1,179	148,546	185
CARGO RICE	3,617	1,085	136,748	300	1,414	467	58,801	330
SUB TOTAL	3,617	1,085	136,748	300	7,797	1,646	207,347	211
MARTINIQUE								
PACK WHITE RICE	560	217	28,802	388	40	14	1,714	340
CARGO RICEPACK WHITE RICE	992	347	45,147	350	1,900	621	78,183	327
WHITE BRKN	224	32	4,262	144	120	16	1,978	131
SUB TOTAL	1,776	597	78,211	336	2,060	650	81,875	315
GAUDELOUPE								
CARGO RICE	650	19	2,453	105				
ARUBA								
CARGO RICE	14,441	4,856	646,962	336				
CARGO BRKN	206	26	3,422	126				

DESTINATION / PRODUCT	JANUARY - DECEMBER, 1993				JANUARY - DECEMBER, 1993			
	QTY EXPORTED (MT)	VALUE		UNIT VALUE	EXPORTED	QTY	VALUE	UNIT
		(US\$ 000)	(G\$ 000)			QTY (US\$000)		
SUB TOTAL	14,648	4,882	650,385	333				
SPAIN								
CARGO RICE	3,300	995	130,695	302				
SWEDEN								
CARGO BRKN	4,307	1,281	161,402	297	3023	725	91,314	240
DOMINICA								
WHITE RICE	63	23	2,980	360				
TURKS & CAICOS								
CARGO RICE	765	264	35344	345				
TOTAL	182,586	55,547	7,327,862	304	124,090	33,045	4,144,466	266

Table 6

SUGAR STATISTICS: 1980-1994

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994
Number of Factories	10	10	10	10	10	10	10	8	8	8	8	8	8	8	n.a.
Acreage Harvested	123,143	136,213	129,609	119,429	125,926	107,526	112,875	106,039	85,823	86,303	91,372	93,307	99,891	98,142	120,134
Tons Cane Milled ('000)	3,601	4,125	3,845	3,571	3,469	3,218	3,348	3,100	2,480	2,548	2,019	2,293	3,081	3,172	n.a.
Yield															
Tons Cane/Acre	29.24	30.28	29.67	29.9	27.54	29.93	29.66	29.23	28.9	29.56	22.1	24.57	30.84	32.31	n.a.
Tons Cane/Tons Sugar	13.35	13.71	13.36	14.18	14.34	13.24	13.64	14.03	14.8	15.41	15.54	14.36	12.68	13.07	n.a.
Tons Sugar/Acre	2.19	2.31	2.22	2.11	1.92	2.26	2.17	2.08	1.95	1.91	1.42	1.71	2.43	2.47	2.14
Production & Exports															
Sugar production (Tons)	269,634	300,790	287,725	251,870	241,861	243,000	245,440	220,995	167,550	164,800	129,920	159,690	243,010	242,640	256,657
Home Consumption: Sugar (Tons)	31,811	36,518	33,193	36,266	34,731	28,396	31,243	42,252	35,846	28,511	27,610	23,875	19,914	23,291	n.a.
Exports: Sugar (Tons)	236,344	262,855	252,542	213,227	205,371	214,543	213,609	176,463	134,828	160,979	129,767	159,430	232,711	219,093	n.a.
Sales															
Local (GSM)	9.7	11	9.9	10.7	26.7	40.4	50.3	68	58.3	173	406	1,049	984.06	1,143.12	n.a.
Average Price/Ton (G\$)	394	301	298	195	769	1,422	1,610	1,610	1,626	6070	14,708	43,953	49,416	49,080	n.a.
Export (GSM)	296.7	285.8	258.8	212.1	271.5	286.6	356.7	971.7	710.2	2,309	3,265	75,105	15,965	14,971	n.a.
Average Price/Ton (G\$)	1,255	1,087	1,025	994	1,322	1,336	1,670	5,506	5,267	14,348	25,167	75,105	68,604	68,336	n.a.
Expenditure															
Employment Costs (GSM)	174.2	196	189.3	185.7	201.9	184.3	207.6	294.2	302.9	515.1	980.5	2,703.70	4,873.10	6,041.00	n.a.
including Profit Share (GSM)															
(Materials and other (GSM)	106.2	126	115.2	104.5	137.3	171.3	186.5	295	306.2	984.1	1,780.71	5,892.42	6,954.94	6,415.60	n.a.
Operating Resulting Before															
Local Subsidy and Interest (GSM)	48.4	-5.3	-28.6	-59.1	-31.8	-22.1	-35.4	83.2	105	293.1	321.87	559.87	573.64	780.45	n.a.
Local Subsidy (GSM)	27.8	33.7	32.2	39.1	31.3	-	-	53.1	89.9	241.6	262.2	178.92	0	0	n.a.
Surplus (Deficit) before Tax (GSM)	6.2	-61.9	-93.2	-119.8	-102.3	-77.8	13.8	20.5	11.4	34.9	38.47	58.17	394.3	760.72	n.a.
Avg. Mid Market exchange rate GS/US\$	na	na	na	na	3.86	4.25	4.27	9.77	10	27.25	39	119.45	124.95	126.86	n.a.

Table 7

PRODUCTION, EXPORTS & IMPORTS OF RAW SUGAR: 1986 TO 1994

YEAR	PRODUCTION	EXPORTS		UNIT VALUE	IMPORTS
	(000 M/T)	(000 M/T)	(GS M)	(GS/TONNE)	(000 M/T)
(1)	(2)	(3)	(4)	(5)	(6)
1986	249.4	209.8	356.2	1,698	-
1987	224.5	187.0	910.8	4,871	-
1988	170.2	136.7	712.2	5,210	-
1989	167.4	170.0	2,342.0	13,776	26.0
1990	132.0	132.0	3,271.0	24,780	28.9
1991	162.5	150.0	11,418.0	76,120	23.0
1992	246.9	229.5	16,598.8	72,326	8.0
1993	245.5	236.8	15,120.0	63,863	0.0
1994	256.7	239.4	16,196.5	67,648	0.0

NOTE: There were no imports of raw sugar in 1993; however white sugar to the extent of 3,300 tonnes was imported

SOURCE: GUYSUCO

Table 8

BREAK-DOWN OF EXPORTS BY DESTINATION: 1994

DESTINATION	QTY EXPORTED	VALUE	UNIT VALUE
	(M/T)	(G\$ M)	(G\$/ TONNE)
EEC	157,651	12,886.4	81,740
USA	14,345	855.9	59,630
WORLD MARKET	46,898	1,596.2	34,036
CARICOM	20,520	857.9	41,808
TOTAL	239,414	16,196.4	67,650

SOURCE: GUYANA SUGAR CORPORATION

Table 9

ESTATES	AREA HARVESTED			SUGAR PRODUCTION			SUGAR PRODUCTION PER HECTARE		
	Hectares			(M/T)			OUTPUT		M/T
	1994	1993	1992	1994	1993	1992	1994	1993	1992
SKELDON	4,815	4,050	4,396	30,568	28,438	29,923	6.35	7.02	6.81
ALBION	8,107	7,560	7,942	53,788	50,185	49,568	6.63	6.64	6.24
ROSE HALL	7,068	5,804	6,332	46,098	38,344	40,363	6.52	6.61	6.37
BLAIRMONT	5,149	4,470	5,027	37,714	33,330	37,497	7.33	7.46	7.46
Sub-Total: BERBICE	25,139	21,884	23,697	168,168	150,297	157,351	6.69	6.87	6.64
ENMORE	3,854	3,505	3,724	16,083	22,606	17,816	4.17	6.45	4.78
LBI	6,785	4,716	4,956	31,132	29,434	28,018	4.59	6.24	5.65
WALES	4,398	2,635	2,896	20,914	21,854	21,611	4.76	8.30	7.46
UITVLUGT/PL	4,319	3,612	3,914	20,359	22,332	22,114	4.71	6.18	5.65
Sub-total: DEMERARA	19,356	14,467	15,490	88,489	96,225	89,559	4.57	6.65	5.78
TOTAL GUYANA	34,858	36,351	39,187	256,657	246,522	246,910	5.77	6.78	6.30

Table 10

PRODUCTION AND DISPOSAL OF INDIGENOUS SUGAR IN GUYANA 1986 TO 1994 (in metric tons)

YEAR	OPENING STOCKS	PRODUCTION	TOTAL			CLOSING STOCKS	IMPORTS	ESTIMATED
			INDIGENOUS AVAILABILITY	EXPORTS	LOCAL DISAPPEARANCE			DOMESTIC CONSUMPTION
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1986	11,551	249,367	260,918	209,835	33,222	17,861	-	33,222
1987	17,861	224,531	242,392	187,035	43,008	12,349	-	43,008
1988	12,349	170,231	182,580	136,675	36,431	9,474	-	36,431
1990	3,551	131,999	135,550	132,059	985	2,506	28,866	29,851
1991	2,506	162,574	165,080	150,056	7	15,017	22,999	23,006
1992	14,427*	246,910	261,337	229,542	10,464	21,331	8,000	18,464
1993	21,329	246,522	267,842	236,757	21,770	9,315	0	21,770
1994	9,315	256,957	265,972	239,423	21,521	5,028	0	21,521

NOTE: Col (4) = Col (2) + Col (3) = Col (5) + Col (6) + Col (7) Col (9) = Col (6) + Col (8).

There was no import of raw sugar into Guyana during 1993. White sugar- about 3,300 tonnes was, however, imported. Closing stock at the end of 1991 (15,017MT) scaled down to (14,427) MT by Guysuco due to losses.

CROP	UNIT	REGION 1	REGION 2	REGION 3	REGION 4	REGION 5	REGION 6	REGION 7	REGION 8	REGION 9	REGION 10	TOTAL
Cereals & Legumes												
Eschallot	000lb			313.0	352.5	1,957.1	480.0					3,102.6
Hot Pepper	000lb			500.0	1,525.0	656.0	2,437.0					5,118.0
Ginger	000lb	1,150.0		188.0	-							1,338.0
Turmeric	000lb	1,250.0			-							1,250.0
Other Spices	000lb			32.0	14.0	15.5						61.5
Fruits												
Banana	000lb		2,750.0	25,200.0	1,115.0	545.0	5,760.0		15.3	95.0		35,480.3
Lime	000lb		195.3	1,460.0		144.0	1,200.0					2,999.3
Grapefruit	000lb		375.2	400.0		22.0	70.0					867.2
Orange	000lb		1,950.0	6,375.0		76.0	2,125.0					10,526.0
Other Citrus	000lb	905.0	0.0	750.0	380.0	31.5	300.0					2,366.5
Citrus Total	000lb	905.0	2,520.0	8,985.0	380.0	273.5	3,695.0					16,759.0
Pineapple	000lb		695.0	20,000.0	510.0		1,105.0					22,310.0
Pear (Avacado)	000lb	150.0	1,310.0	600.0		-						2,060.0
Carambola	000lb		5,570.0	100.0	-	30.9						5,700.9
Watermelon	000lb			800.0	100.0	2,650.0	3,375.0					6,925.0
Other Fruits	000lb	525.0	560.0	750.0	1,150.0	3,560.6	250.0	560.0				7,355.6
Other Crops												
Coffee	000lb	950.0	750.0	875.0								2,575.0
Cocoa	000lb	65.0		50.0								115.0
Totals		46,990.5	43,405.3	144,576.0	25,787.5	34,948.7	62,543.0	3,551.4	16,230.5	10,903.5	10,790.0	399,726.4

Table 13

(Total Exports of Non Traditional Agricultural Produce via Air and Seaports (Fresh & Processed)
January - December 199A

COMMODITY	EXPORT	EXPORT
	VOLUME	VOLUME
	(Tonnes)	(Tonnes)
	1993	1994
FRESH		
Awara	0.34	3.27
Avocado	0.00	3.68
Banana	0.00	1.17
Bilimbi	0.00	1.12
Bora	13.82	23.79
Boulangier	8.14	27.91
Breadfruit	0.01	2.30
Breadnut (katahar)	0.44	6.35
Cabbage	0.00	0.00
Calaloo (poi)	0.11	12.16
Cassava	0.00	0.94
Carambola(fresh)	0.00	0.00
Cashew	0.00	0.89
Cherry	0.00	0.00
Chichera	0.00	0.46
Corilla	0.02	1.05
Cucumber	0.00	0.05
Dasheen	0.00	0.09
Dunks	0.43	2.81
Eddo	24.34	33.27
Eschallot	0.63	1.51
Flower/foilage	0.78	1.87
Genip	0.89	12.44
Ginger	0.28	1.76
Gooseberry	0.00	0.50
Golden apple	0.28	1.92
Grapefruit	0.43	1.07
Guava	0.00	0.11
Herbs (Medicinal)	0.33	0.92

COMMODITY	EXPORT	EXPORT
	VOLUME	VOLUME
	(Tonnes)	(Tonnes)
	1993	1994
FRESH		
Awara	0.34	3.27
Avocado	0.00	3.68
Jackfruit (kowa)	0.05	3.25
Kuru	0.00	0.00
Lime	35.34	77.98
Mango	15.78	72.74
Mamey apple	0.71	4.54
Ninwah	0.17	0.00
Ochro	0.29	7.27
Orange	18.02	2.05
Others *	109.30	22.48
Papaw	0.01	0.33
Passion fruit	0.00	0.46
Pea	0.00	0.15
Peanut	0.00	0.00
Pepper (hot)	9.76	21.57
Pepper (wiri wiri)	1.80	6.86
Pumpkin	7.52	80.38
Pineapple	402.95	374.85
Plantain	91.36	163.28
Plant parts	0.00	0.26
Psidium	0.10	0.81
Sapodilla	0.86	7.28
Saeme	1.93	13.35
Sijan	0.00	0.25
Somotoo	0.00	0.05
Spices	0.48	0.00
Squash	0.69	7.35
Starapple	0.08	0.80
Sweet basil	0.19	0.65
Sweet potato	0.00	8.54
Tangerine	4.73	3.12
Tamarind	0.20	0.35
Thyme (fresh)	0.00	0.33

Table 14

tal Exports of Non Traditional Agricultural Produce via Air and Seaports :
1993 and 1994

COMMODITY	EXPORT	EXPORT
	VOLUME	VOLUME
	(Tonnes)	(Tonnes)
	1993	1994
Achar	1.70	5.78
Awara	0.34	3.27
Avocado	0.00	3.68
Banana	0.00	1.17
Bilimbi	0.00	1.12
Bora	13.82	23.79
Boulangier	8.14	27.91
Breadfruit	0.01	2.30
Breadnut (katahar)	0.44	6.35
Cabbage	0.00	0.00
Calaloo (poi)	0.11	12.16
Cassava	0.00	0.94
Cassava bread	0.61	0.21
Cassava starch	0.00	4.14
Casareep	0.89	3.89
Carambola(fresh)	0.00	0.00
Carambola (psvd)	3.78	0.54
Carambola (juice)	0.00	0.00
Cashew	0.00	0.89
Cherry	0.00	0.00
Cherry pulp	0.00	0.00
Chichera	0.00	0.46
Corilla	0.02	1.05
Coconut (broom)	0.41	0.55
Coconut (dry)	24.74	6.99
Coconut (water)	0.00	0.00
Coconut shell powder	78.72	38.27
Coffee beans	5.81	40.88
Coffee ground	0.00	0.82
Copra	161.70	2,211.85
Cucumber	0.00	0.05
Dasheen	0.00	0.09

COMMODITY	EXPORT VOLUME (Tonnes)	EXPORT VOLUME (Tonnes)
	1993	1994
Achar	1.70	5.78
Dunks	0.43	2.81
Eddo	24.34	33.27
Eschallot	0.63	1.51
Flower/foilage	0.78	1.87
Genip	0.89	12.44
Ginger	0.28	1.76
Gooseberry	0.00	0.50
Golden apple	0.28	1.92
Grapefruit	0.43	1.07
Guava	0.00	0.11
Guava jam & jelly	8.44	23.30
Guava purcc	0.00	0.00
Heart of Palm	940.90	1,218.69
Herbs (Medicinal)	0.33	0.92
Jackfruit (kowa)	0.05	3.25
Kuru	0.00	0.00
Lime	35.34	77.98
Mango	15.78	72.74
Mamey apple	0.71	4.54
Molasses	1.62	1.61
Ninwah	0.17	0.00
Ochro	0.29	7.27
Orange	18.02	2.05
Papaw	0.01	0.33
Passion fruit	0.00	0.46
Pca	0.00	0.15
Peanut	0.00	0.00
Pepper (hot)	9.76	21.57
Pepper (crushed)	0.00	1.29
Pepper (wiri wiri)	1.80	6.86
Pumpkin	7.52	80.38
Pincapple	402.95	374.85
Pineapple chunk/juice	120.28	41.25
Pincapple jam & jelly	3.69	7.75

COMMODITY	EXPORT	EXPORT
	VOLUME	VOLUME
	(Tonnes)	(Tonnes)
	1993	1994
Achar	1.70	5.78
Plantain	91.36	163.28
Plant parts	0.00	0.26
Psidium	0.10	0.81
Sapodilla	0.86	7.28
Sacme	1.93	13.35
Sijan	0.00	0.25
Somotoo	0.00	0.05
Sorrel (dried)	0.00	0.18
Spices	0.48	0.00
Squash	0.69	7.35
Starapple	0.08	0.80
Sweet basil	0.19	0.65
Sweet potato	0.00	8.54
Tangerine	4.73	3.12
Tamarind	0.20	0.35
Tea bush & bark	0.00	1.96
Thyme (dried)	0.19	0.96
Thyme (fresh)	0.00	0.33
Watermelon	0.00	0.14
Whitey	0.15	0.77
Yam	0.00	0.79
Others *	109.30	22.48
TOTAL EXPORTS	2,107	4,637

Note: Bank of Guyana Remittance calculated based on the average remittance rates for 1995 Rate used for US\$1.00 = G\$134.00
 * Others include unspecified fruits & vegetables and shipments of commodities which were under twenty-five (25) kgs.

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Table 12

**QUARTERLY PURCHASES OF FLUID MILK & PRODUCTION OF RECONSTITUTED MILK AT LIDCO:
1994 & 1993 (in gallons)**

	1994	1993	% CHANGE	1994	1993	RECONSTITUTED MILK OUTPUT
1ST	28,842	21,717	32.8	17,001	28,172	-39.7
2ND	27,666	44,471	-37.8	14,336	9,995	43.4
3RD	21,778	45,528	-52.2	23,485	6,987	236.1
4TH	14,420	25,987	-44.5	27,916	25,913	7.7
TOTAL	92,706	137,702	-32.7	82,738	71,066	16.4

SOURCE : LIDCO