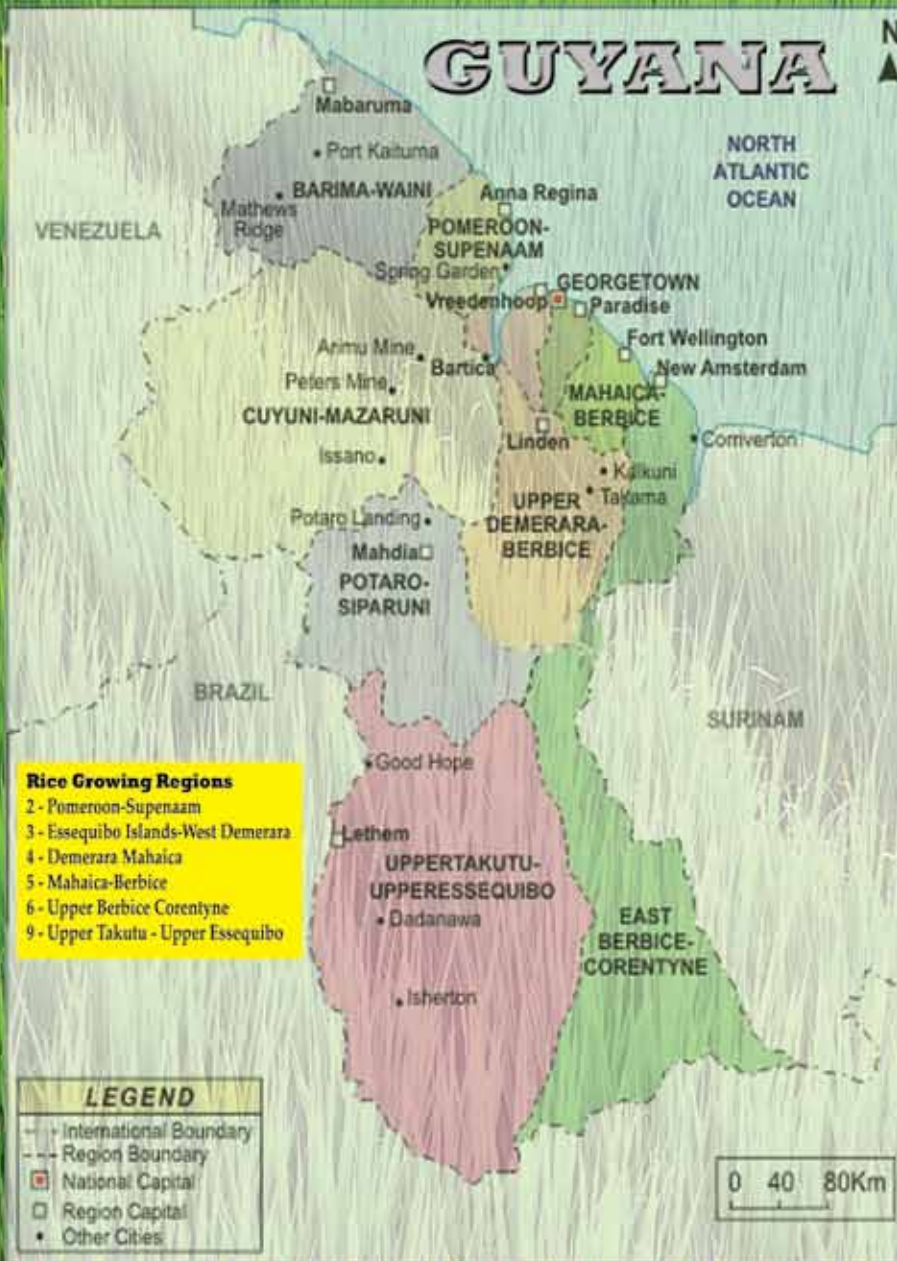




# Guyana Rice Development Board





# **Guyana Rice Development Board**

## **Annual Report 2010**

To Contact us:  
Guyana Rice Development Board  
116-117 Cowan Street,  
Kingston, Georgetown  
website: [www.grdb.gy](http://www.grdb.gy)  
email: [grdb@gol.net.gy](mailto:grdb@gol.net.gy)  
Tel: 225-8717, 226-6999  
Fax: 225-6486



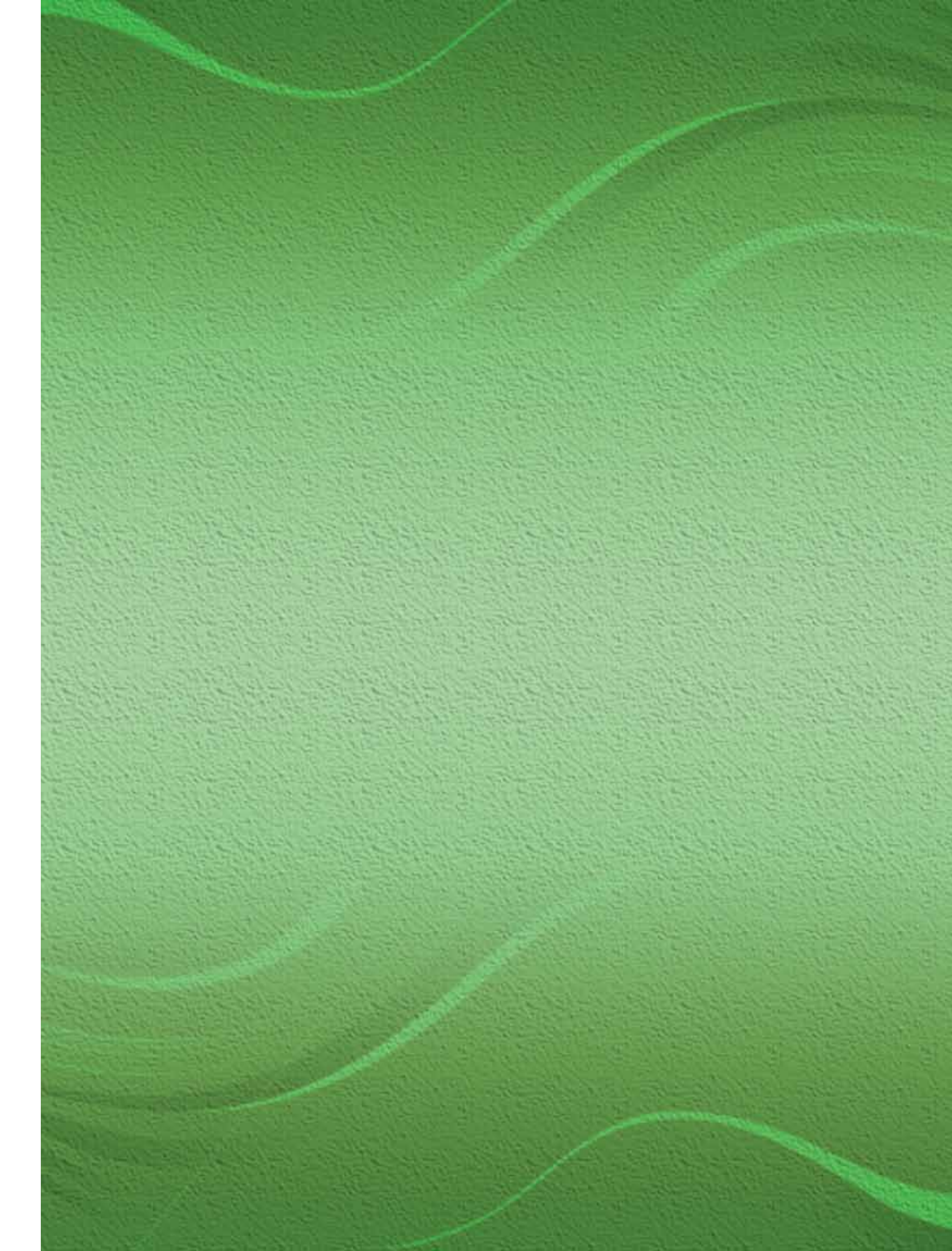




## CONTENTS

Vision Statement.....	1
Mission Statement.....	1
Introduction.....	2
Minister Of Agriculture Statement.....	4
Chairman’s Statement .....	6
General Manager’s Statement.....	7
Administrative Department.....	9
Projects For 2010 – Government Assistance To Rice Farmers .....	15
Finance Report.....	24
Export & Trade Facilitation.....	27
Extension Division.....	31
Research Highlights For 2010 .....	35
Quality Control Department .....	43
Activities In 2010.....	47
Staff.....	53
Appendix 1 - Licensed Mills - 2010 .....	60
Appendix 2 - Rice Statistics 1969 - 2010 .....	64
Appendix 3 - Comparison Of Monthly Exports (2001-2010) .....	65
Appendix 4 - Export According To Products 2010 .....	65
Appendix 5 - Export As Per Destination 2010 .....	66
Appendix 6 - Average Export Prices 2003-2010.....	67
Appendix 7 - Spring Crop Harvesting 2010 .....	69
Appendix 8- Autumn Crop Harvesting 2010.....	70
Appendix 9 - Harvesting Production 2010 .....	71
Appendix 10 - Paddy Price 2000-2010.....	72







## Vision Statement

“An integrated, sustainable, and profitable industry producing and marketing rice for the benefit of all Guyanese.”

## Mission Statement

“To efficiently utilize the resources of Guyana to produce and market high quality rice and rice by-products as a staple food for local and international markets while providing employment and foreign exchange earnings.”



## The Functions of the Guyana Rice Development Board

### INTRODUCTION

The Guyana Rice Development Board was established by Act Number 15 of 1994 and, as provided for under section 3 (iii), the management, powers and functions of the Board are overseen by a General Manager and a Chairman of the Board of Directors.

By virtue of section 4 of the Act, the Board of Directors shall comprise of no more than thirteen members, with three members representing the Guyana Rice Producers Association (RPA), two members representing Guyana Rice Millers and Exporters Development Association (GRMEDA), and one member representing consumers.

Vision Statement of the GRDB is as follows: “An integrated, sustainable, and profitable industry producing and marketing rice for the benefit of all Guyanese.”

GRDB’s Mission statement is as follows: “To efficiently utilize the resources of Guyana to produce and market high quality rice and rice by-products as a staple food for local and international markets, while providing employment and foreign exchange earnings.”

### Organizational Structure

The structure is as follows:

1. Finance
2. Administration
3. Export & Trade Facilitation
4. Quality Control
5. Research
6. Extension
7. Internal Audit

### Finance

This Department is staffed with an Accountant, 2 Assistant Accountant, Senior and 2 Junior Accounts Clerks, Cashier, and a Typist/Clerk. The Department is responsible for payment of paddy and/or rice graded among other related duties.

### Administration

This Department, which is staffed by a General Manager, Deputy General Manager, Occupational Health and Safety Officer, three Confidential Secretaries, Typist Clerk, 2 Drivers an Office Attendant and an Office Assistant. The department is responsible for the day-to-day





activities of the Board, the hiring of new staff members, conducting training, dealing with any legal matters, staff welfare, and the issuing of export and producer licenses.

### **Export and Trade Facilitation**

Headed by a Marketing Assistant, staffed by a Marketing Clerk, Customs Clerk, and a Confidential Secretary, this department is solely responsible for the preparation of all relevant documentation for the exporting of rice from Guyana.

### **Quality Control**

This Department is responsible for ensuring that the quality of rice produced and/or sold by rice millers and exporters meet the requisite specifications. The Department is headed by a Manager, who is supported by Coordinators in all the rice-growing regions. These officers work to make sure that the rice leaving Guyana is of the prescribed and required quality as per international standards.

### **Research**

This component of the Guyana Rice Development Board's activity forms an integral part of its operations.

The unit is based at the Rice Research Station at Burma, where new varieties and strains are developed, so that farmers can have access to plants that are more conducive to providing a better quality and higher volumes of grain. Research at the station is done in plant breeding, entomology, weed management and pathology. The research section of the Rice Research Station is headed by a Chief Scientist, who oversees the operations of the department. He is ably supported by research scientists, research assistants, research technicians and labourers.

### **Extension**

This Department is responsible for the transfer of technology from the Research Station to the farmer. Extension Officers, based in all the regions, regularly meet with farmers and serve as an advisory body to assist the farmers in the acquisition of inputs, the retooling with new technology available, and/or information dissemination of pertinent data that could lead to improved and more productive husbandry practices. Where demonstrations are needed the extension officers provide this service, thus also acting as educators/facilitators/enablers to the farmers.

### **Internal Audit**

This department is comprised of an internal auditor and an audit clerk who audits the procedures of the organisation to ensure standards are maintained.

All the departments of the Guyana Rice Development Board work together in adjunctive and collaborative endeavor and so complement each other in order to achieve the mission and the vision of the Organization.





## Minister of Agriculture Statement



Hon. Robert Persaud MBA, M.P.  
Minister of Agriculture

Performance in the rice sector for 2010 represented a 0.4 percent growth in value added of the Gross Domestic Product over the previous year, causing Guyana's rice industry to grow to such an extent that it is now rated as the second most important agricultural industry with the use of modern technology and adoptable research and development methods to ensure that this is maintained. In 2010, the country recorded its second highest ever production and the highest level of export revenues. This increased production was as a result of weather conditions that on balance proved favourable to the industry's production cycle, and extended harvesting of paddy into late December. Notwithstanding the El Niño phenomenon and global changes, the achievement of the sector from this year has certainly ensured that the local rice industry is on a sustainable path of having another successful year.

Meanwhile, on the rice development front, the GRDB has developed flood and drought tolerant rice varieties (GRDB 9 & GRDB 10), which can withstand the effects of the extreme weather condition for up to two weeks and two candidate varieties, currently under the final stages of testing, will be released in 2011. Two seed dryers were also acquired. This, coupled with the construction of thirteen drying facilities in Regions 2, 3, 4, 5 and 6 in 2010, has allowed for increased production and productivity. Further, the Government continues to provide substantial support in the areas of improved drainage and irrigation facilities, new and improved farming practices including weed and water management, plant nutrition and other agronomic practices, the evaluation of weedicides and pesticides for weed, pest and disease control and the sourcing and testing of over 300 additional rice germplasm lines for possible release as varieties in the sector.

Moreover, the rice industry continues to face many challenges on both the local and international markets. Increasingly over time the investments that have been taking place have allowed us to better manage the sector, but we have not achieved our objectives as yet, there is still much that we need to do. While there is singularly more land under cultivation, the need for enhanced water management has become even more demanding especially in the context of climate change and as such, the Government will be spending more to ensure that rice farming activities are competitive.

It is hoped that with the favorable international markets, millers will be punctual in payment as well as offer farmers better incentives. We will insist that the treatment meted out to farmers and their stakeholders are not only in conformity with our laws but, that it is also fair for the industry. Farmers are challenged to export directly to the export markets, so as to be able to receive better prices. This is to ensure that farmers are directly involved to benefit from the opening of new market opportunities.

The rice industry is projected to increase its production even further in 2011 to 379,628 tonnes which would be the highest ever level of production and, as a result, generate a 4.9





percent increase in value added. The Government of Guyana is committed towards ensuring the transformation of the rice industry continues, especially with more emphasis on value added. We are pursuing every avenue to enhance the competitiveness of the rice industry, and one initiative is by instituting provisions to empower farmers with coping mechanisms to deal with the many extant and emerging challenges and to protect them from the adverse effects of impacts to the industry of a negative and/or destructive nature.

The rice industry demonstrated its resilience and this is a positive feature as we continue the process of transformation.

Hon. Robert Persaud MBA, M.P.  
Minister of Agriculture





## Chairman's Statement



Nigel Dharamlall  
Chairman

2010 has been recorded as another successful year for the rice industry in Guyana, due to significant achievements in the areas of production and export. At the end of 2010, production stood at 556,195mt paddy, the second highest figures for the rice sector, while exports recorded a staggering 336,313mt with a value of US\$154,622,744.10, which represents the highest earnings ever for the sector. Further, rice continues to hold its place as one of the pillars of Guyana's economy.

In 2010, the international rice prices were subdued, reflecting sluggish import demand and ample supplies in exporting countries. Several southern hemispheric countries had setbacks that impacted crops, while unfavourable climatic conditions in India saw a substantial decline in production. However, shortfall in India's export was offset by increased output from Thailand, Vietnam and China.

Subdue prices and the negative effects of the changing weather did not made it easy for the rice industry which was affected by a severe dry spell in the spring crop and excessive rain fall in

the autumn crop. In the spring crop the challenge was irrigation, while in the autumn crop we experienced greater disease problems.

Further, the resolute support emanating from the Ministry of Agriculture and the Government of Guyana, which provided G\$400 Million and G\$110 Million for each crop, respectively, to assist rice farmers who were severely affected by the global economic crisis and the El Nino phenomenon. This also contributed to the high production levels and consequential increased export earnings. For farmers to commence the autumn crop, they were assisted with seed paddy and fertilizer. Also thirteen (13) drying floors were constructed across the rice growing regions to facilitate the drying of paddy.

The initiative to secure the Venezuelan market for the supply of rice and paddy by the Government of Guyana significantly benefitted the rice sector with the exportation of 63,480.7mt paddy and 22,274mt white rice.

The Hinterland Rice and Beans Project at Moco Moco, Region 9, received an investment by the Spanish Agency for International Co-operation for development. The project is deemed a success as the first crop and significant and positive changes to food security in the region and has also helped to improve the livelihood of the villagers by creating job opportunities. Added to this is a regular availability of the commodities, rice and beans, which is economical with regards to prices (rice/beans).

The Rice Research Station continued its objective to develop high-yielding varieties with the tolerance to lodging, stable resistance to blast, high milling yield, and excellent cooking qualities. GRDB 09 and GRDB 10 continue to show stability in their superiority over the other commercial varieties being grown. The grain yield performance over the two seasons for GRDB 09 and GRDB 10 were 6.3t/ha and 7.0t/ha respectively, which represented a 10% and 18% advantage over their corresponding check varieties.

We wish to thank all our local partners from agencies under the Ministry of Agriculture, and also from international agencies, for their commendable support. We look forward to strengthen our relationships as we propel the rice industry in Guyana to new heights.

Nigel Dharamlall  
Chairman





## General Manager's Statement.



Mr Jagnarine Singh  
General Manager

2010 can be considered a year of many challenges. The year started with El Nino conditions and ended with the opposite-La Nina conditions. Despite the many challenges, we have experienced a record year for exports and a very good year for production. This is due to no small sacrifice of the farmers; as we have seen their resilience again in 2010. Difficulties incurred, included the weather and a large defaulting of payment to farmers from millers/exporters. This has made a significant impact on the livelihood of some farmers.

This year is very significant, as it marks the first time in the history of the rice industry that the earnings from export have surpassed that of sugar. All the stakeholders should be proud of this achievement, as this success comes with the dedication and hard work of the producers; as well as the support of Government, in ensuring that the enabling conditions are provided.

Rice export was the highest ever in both quantity and value; a total of 336,313 mt of paddy, rice and other by-products of paddy was exported at a value of US \$ 151,321,890.71. The production of 361,527 Mt of rice equivalent for 2010 was the highest in the last ten years.

GRDB continues to provide requisite services to rice stakeholders; and in the area of research the following are some notable achievements: the two new varieties of rice (GRDB 09 and GRDB 10) which were released (autumn 2009) for commercial cultivation in Guyana have gained widespread acceptance by farmers across the rice belt. The research scientists continued their work in improving on the management practices for all the commercial varieties. More than 300 new rice germplasm/ lines with different traits were sourced from international institutes during 2010. More than 2,000 germplasm/breeding lines were screened for tolerance/resistance to various pest and diseases. The RRS has been able to maintain the genetic purity of all the commercial rice varieties for our farmers with over 12,000 bags high-class seed paddy for distribution to farmers countrywide.

The Extension Department continued its training of farmers with the establishment of thirty eight (38) Farmers' Field Schools (FFS) throughout the country in which eight hundred and ninety eight (898) farmers participated during the sessions. Eight (8) farmer exchange visits with the participation of one thousand six hundred and twenty-five (1,625) farmers were held. These exchanges allowed farmers to observe innovative technologies, in exercises that were conducted jointly between farmers and the Board. Additionally, the occasion provided the opportunity for the farmers from the regions to interact with each other and share their knowledge and experiences. Training of farmers on management and administrative skills was initiated during the year for members of Water Users Association (WUAs) in the nine (9) pilot study areas, located in Regions 3, 4 & 6. A joint programme between the GRDB, the Fertilizer Corporation of America, and Agroservices International, which began in 2009, continued during the year. This initiative seeks to promote and expand the use of balanced nutrition in rice cultivation. This resulted in two hundred and thirty eight (238) soil samples being collected from farmers' fields and analysed by Agroservices International in the United States.





This Quality Control Department continued to ensure that rice and its by-products exported met the required quality as per international and local standards. Fifty-three (53) industry operatives were trained in post-harvest management. Sixty six (66) mills have been licenced for the year. GRDB continued pursuit of certification of the Central Laboratory and the final audit by G.N.B.S. for certification of the G.Y.S. 170 standard and eventual ISO 17025 will be done in the first quarter of 2011.

Over the last decade the industry increased yields from 3.8 tonnes per ha to 4.4 tonnes per ha thus increasing both production and exports and placing rice as the highest agricultural foreign exchange earner from exports in 2010. In addition to the dedication of the farmers, these changes were due to the development of disease resistant rice varieties, increase in quality seed paddy produced and distributed to farmers, rehabilitation of the drainage and irrigation systems, access to markets, etc. But for the industry to continue with the same momentum it has to invest, increase time, money and other resources in research and development, create linkages and strategic marketing alliances, and implement policies that will take the industry to much higher levels of sustainability.

On behalf of the Board of Directors and Management, I express sincere thanks to all members of staff for the dedicated and assiduous support, in making 2010 the successful year it is.

Jagnarine Singh

General Manager





## Administrative Department

### Organizational structure:

For the period of January 01 – December 31, 2010, the following persons were appointed to the Board of Directors, namely:-

<b>Name</b>	<b>Designation</b>
Mr. Nigel Dharamlall	Chairman
Mr. Dharamkumar Seeraj, MP	Vice-Chairman
Mr. Leekha Rambrich	Director
Dr. Peter DeGroot	Director
Ms. Savitri Sukhai	Director
Mr. Mohamed Sattaur	Director
Ms. Shirley Edwards, MP	Director
Mrs. Prema Ramanah Roopnarine	Director
Mr. Ramsahai Ramnarain	Director
Mr. Jagnarine Singh	Ex-Officio
Mr. Madanlall Ramraj	Secretary

There were eleven (11) statutory meetings of the Board of Directors.

Section 8 (1) of the Act provides for the appointment of the Sub-Committees to assist with the functions of the Board of Directors. Accordingly, four (4) Sub-Committees were appointed, namely:-

- a. Finance and Administration (Sub-Committee)
- b. Marketing and Quality Control
- c. Research and Extension
- d. Procurement

Sub-Committee members of the various Sub-Committees are as follows:

### LIST OF FINANCE & ADMINISTRATION SUB-COMMITTEE MEMBERS

<b>Name</b>	<b>Designation</b>
Mr. Mohamed Sattaur	Chairman
Mr. Dharamkumar Seeraj, MP	Member
Ms. Shirley Edwards, MP	Member
Mr. Nigel Dharamlall	Member
Mrs. Prema Ramanah Roopnarine	Member





Ms. Savitri Sukhai	Member
Mr. Jagnarine Singh	Member
Mr. Madanlall Ramraj	Member
Mr. Noel Sookhai	Member
Mr. Peter Ramcharran	Secretary

There were two (2) meetings of the Finance and administration Sub-committee.

### **LIST OF MARKETING & QUALITY CONTROL SUB-COMMITTEE MEMBERS**

<b>Name</b>	<b>Designation</b>
Mr. Nigel Dharamlall	Chairman
Mr. Dharamkumar Seeraj, MP	Member
Dr. Peter DeGroot	Member
Mr. Jagnarine Singh	Member
Mr. Madanlall Ramraj	Member
Mrs. Gloria Chester	Member
Ms. Natasha Gaskin	Member
Ms. Allison Peters	Secretary

There were three (3) meetings of the Marketing and Quality Control Sub-committee members.

### **LIST OF RESEARCH AND EXTENSION SUB-COMMITTEE MEMBERS**

<b>Name</b>	<b>Designation</b>
Dharamkumar Seeraj, MP	Chairman
Mr. Jagnarine Singh	Member
Mr. Ramsahai Ramnarian	Member
Mr. Leroy Small	Member
Mr. Bindraban Bisnauth	Member
Mr. Leekha Rambrich	Member
Mr. Madanlall Ramraj	Member
Dr. Mahendra Persaud	Member
Mr. Kuldip Ragnauth	Secretary

There were twelve (12) meetings of the Research and Extension Sub-Committee members.





## LIST OF PROCUREMENT SUB-COMMITTEE MEMBERS

Name	Designation
Mrs. Prema Ramanah Roopnarine	Chairperson
Mr. Dharamkumar Seeraj, MP	Member
Ms. Shirley Edwards, MP	Member
Mr. Jagnarine Singh	Member
Mr. Madanlall Ramraj	Secretary

There were fourteen (14) meetings of the Procurement Sub-Committee members.

## Organisational Structure of Guyana Rice Development Board

There have been no changes or additions to the organizational structure of the Guyana Rice Development Board. The composition is as follows:-

1. Finance
2. Administration
3. Export and Trade Facilitation
4. Quality Control
5. Research
6. Extension
7. Internal Audit

## Management Committee

### LIST OF MANAGEMENT COMMITTEE MEMBERS

Name	Designation
Mr. Jagnarine Singh (General Manager)	Member
Mr. Madanlall Ramraj (Deputy General Manager)	Member
Mr. Kuldip Ragnauth (Extension Manager)	Member
Ms. Allison Peters (Quality Control Manager)	Member
Mr. Peter Ramcharran (Accountant)	Member
Mr. Gloria Chester (Marketing Assistant)	Member
Mr. Noel Sookhai (Internal Auditor)	Member
Dr. Mahendra Persaud (Plant Breeder)	Member
Mr. Bindraban Bisnauth (Farm Manager)	Member
Mrs. E. P. Isaacs (Occupational Health & Safety Officer)	Member
Mr. Jai Prakash Narine (Resident Manager)	Member





## List of Management Committee Members

The committee met as and when required, and for 2010 there were two (2) meetings of this committee.

## Staff Complement

One hundred and ninety one (191) employees comprised the staffing strength of the Guyana Rice Development Board. Supervision is provided by the respective departmental heads.

## Staff-Appointments

Appointments were made to fill vacancies at the following locations, viz:-

### Head Office

Accounts	Abigail Constantine Assistant Accountant
Audit	Thakurdai Gopaul Audit Clerk
Administration	Vejailatchmi Benimadho Confidential Secretary
	Amarnauth Narine Driver
Hinterland Rice & Beans Project	Gordon D'Aguiar Driver
Export & Trade Facilitation	Nekita Singh Secretary
	Devon Basdeo Marketing Clerk
	Nashree Singh Clerk
Quality Control	Analisha Jodhan Secretary
	Kumar Ranga Grading Officer
	Seon Johnson Technical Assistant
<b>Anna Regina Office</b>	Hardat Sahadeo Field Officer
	Sanjay Singh Grading Officer





**Crane Branch Office**

Julia A Chunoo  
Regional Superintendent

Deodram Garbarran  
District Rice Extension Officer

Mahmood Khan  
Field Officer

Jai Prakash Narine  
Resident Manager

Jamal Euorpe  
Research Technician

Laurel Alfred  
Research Technician

Alwyn Rukhram  
Research Technician

Jemaine Sharpe  
Technical Assistant

Trichell Williams  
Typist/Clerk

Everton Williams  
Resident Driver

Roopnarine Persaud  
Driver

Vishnudatt Singh  
Driver

Jairam Harridat  
Field Officer

Roderick Somrah  
Technical Assistant

Barbara Hochan  
Regional Supervisor

**Burma Rice Research Station****Corriverton Office****Ministry of Agriculture**

We welcome these new staff members and wish them a long and productive stay at the Guyana Rice Development Board.

**Resignations and Retirement**

There were eight (8) resignations, one (1) retiree, and seven (7) terminations of contract.





## Occupational Health and Safety

The Occupational Health & Safety Department in collaboration with the Ministry of Health and the Quality Control Department inspected all rice mills under the watch of the Board, to ensure that the health and safety of the employees were paramount. A number of breaches were sited and noted. Advice was offered on how to implement simple cost effective corrective measures.

The Board was recognized by the Pan Caribbean Business Collation for outstanding work done, in the areas of HIV/ AIDS education and life skills training to this end the Board was asked to present at the fifth meeting of the collation. Much credit was given and the idea of adapting the Boards approach in the Caribbean setting was alluded to by the International Labor Organization discussions are currently on going.

Currently the Board through the Rural Enterprise and Agricultural Development Project (READ) has its presence in Regions 2,3,4,5,6& 10, with the main objective to improve the living conditions of the of the poor rural farming communities through life skills education. The following areas are in focus.

Substance abuse  
 Gender sensitization  
 Domestic violence  
 Effective parenting  
 Motivation and self esteem  
 Suicide  
 STI's  
 Teenage pregnancy and peer pressure.

Through collaborative efforts with both local and international organizations the board continues to seek funding and support keeping in focus it's most valuable resources the human resource.

## Legal Issues

Matters involving farmers, millers/exporters and buyers were dealt with internally and through the Board's Legal advisers, Cameron and Shepherd.

## Medical Scheme

Employees contributed to this scheme, which is underwritten by Hand-in-Hand Mutual Insurances ltd.

## Union Recognition

There are two unions recognized by the Board, namely:-

- General Workers' Union (GWU), which represents staff at Head Office and the four Regional Offices; and
- Union of Agriculture and Allied Workers (UAAW), which represents staff at the Burma Rice Research Station.

During the year, management met with two unions to discuss matters of concern to employees. Discussions were held on staff welfare, sports, etc.

Female members of staff, drivers, laboratory assistants, office assistants and office attendants were provided with uniforms.



## Projects for 2010 – Government Assistance to Rice Farmers

The Government of Guyana assisted rice farmers across the country who were affected by the Global Economic Crisis and the El Niño phenomenon. This assistance was provided through the Guyana Rice Development Board. These assistance packages were:

1. G\$400 Million Project
2. G\$110 Million Project

### 1. \$400 Million Project

In 2009 the Government of Guyana through the Guyana Rice Producers Association (RPA) and the Guyana Rice Development Board, embarked on a programme to assist rice farmers across Guyana who were affected by the global economic crisis. It was recognized that many farmers suffered as a result of the high competition, drop in demand and reduced prices for rice worldwide. Rice farmers were forced to retain their stock, faced spoilage and/or find alternative local markets. However, these, among other measures, did not solve the problem and many rice farmers encountered major losses.

In response to this global crisis the Government of Guyana allocated the sum of G\$400 million as a measure of assistance, particularly for the most vulnerable and affected farmers in Regions 2, 3, 4, 5 and 6. This assistance is implemented by the GRDB in collaboration with the RPA and the Ministry of Agriculture (MoA) in the following areas:

1. Distribution of fertilizer
2. Construction of twelve (12) drying facilities



Construction of a Drying Floor







Honourable Minister of Agriculture-  
Mr. Robert Persaud addressing  
visitors at the commissioning  
of Anna Regina Drying Floor Facility



Visitors at the commissioning  
of one of the Drying Floor facilities



Commissioning of the  
Fort Wellington Drying Floor facility







Honourable Minister of Agriculture-  
Mr. Robert Persaud commissioning  
drying floor



Farmers utilizing drying floor





## G\$110 Million Project

The Government of Guyana, through the Guyana Rice Development Board (GRDB) and the Guyana Rice Producers Association (RPA), embarked on a programme to assist rice farmers across Guyana who were affected by the El Nino phenomenon.

The rice industry was severely affected, resulting in many farmers being unable to cultivate their plots; as well some losses occurring in the fields. The Government of Guyana took the initiative to render support to rice farmers by providing inputs in the form of seed paddy and fertilizer to assist in their return to rice cultivation.

Rice farmers who suffered complete losses in the fields were given one bag seed paddy and one bag fertilizer per acre for a maximum of thirty acres.

**Table A: Distribution of seed paddy and fertilizer.**

Region	No of Seed Paddy Distributed	No of Fertilizer Distributed
# 2	2249	1138.5
# 3		
West Coast	3657.8	1366.5
Leguan	2491	48.5
Wakenaam	1068	67
# 4	116	58
# 5	2082	969.5
# 6	702	351
<b>Total</b>	<b>12365.8</b>	<b>3999</b>

## Hinterland Rice and Beans Project

The Government of Guyana, in collaboration with the Spanish Agency for International Co-operation for Development, the Ministry of Agriculture and the Guyana Rice Development Board, established a Hinterland Rice and Beans Project, which is a food safety programme for the Indigenous Communities of the Rupununi Savannah.

The project seeks to increase the food self-sufficiency of nine villages in Regions 8 and 9 through rice and beans production.

The overall objective of the project is two-pronged - to increase the food self-sufficiency and incomes of residents, thus improving the livelihood of communities located in Regions 8 and 9.

The specific objectives of the projects are:



- To introduce the production of rice and beans
- To maximize the use of by-products of rice and beans
- To introduce interventions and technology that will be appropriate to the project areas
- To increase the basket of products that will be utilized and marketed

The pilot project commenced in Moco Moco Village in Region 9, where a total of eighty-two acres of land were sown with paddy and eleven and one-half acres were sown with bean seeds.

The scope of this project in Region 9 includes the production of rice and beans, their utilization and that of their by-products.

### **Benefit of the Project**

Direct benefits include food security on a sustainable basis and a reduction in poverty for the residents of the Hinterland communities involved in the project.

#### **Irrigation System and Storage Bond and Drying Floor**

Before planting could be done in the fields an irrigation system had to be constructed. A strip of land of approximately 9m in width and 300m in length was cleared of vegetation, an activity that took 6 days to complete due to the large trees, shrubs and grasses. This strip was cleared from area 1, which is situated on the north western shoulder of the Kanuku mountain range towards the Moco Moco creek, which lies northeast of area 1. The installation of the irrigation network commenced on April 24 and was completed in May.

A storage bond and drying floor was also constructed in order to have a proper storage and drying facility.

### **Analysis of the Land**

After a thorough analysis of the nature of the land in area 2; and the climatic conditions in this region, a decision was made to reserve this area for the dry season only, since the area is low and lying alongside the creek. As the level of the creek rises the land inundates. The water inundates the land for a period of about five months and the growth cycle of most commercial varieties does not exceed four months; as such mechanical harvesting would be made almost impossible because of wet fields. Also it is difficult to prepare the land in the dry season and leave it during the wet season since weeds grow vigorously because of the moisture.

### **Clearing of Land**

The clearing of the land in areas 1 and 2 was done both manually and mechanically, with the workers felling and cutting trees, while clearing the under bushes with chainsaw, cutlass and scythe before the tractor with a three bottom disc plow could be used. This piece of mechanical equipment was borrowed from NARI.

### **Equipment**

On March 24, a John Deere tractor with three-bottom disc plow arrived in Lethem.



The relocation of the large combines was done in May, when the large combine was relocated



to Burma Rice Research Station and the small combine was relocated to Moco Moco.

The operator for the harvester is training the villagers on how to operate the combine; consequently, from the next crop season, the harvester will be operated by the villagers.

### **Sowing of Paddy and Beans seed**

The sowing of the paddy commenced on May 19, and broadcasting was done manually with the assistance of the villagers. Broadcasting was completed on June 2 after 82 acres had been sown.

The fields were broadcasted with two varieties of paddy, namely the Br444 and the F<sub>7</sub>10. Fields 1, 2, 3, 9 and 11 were sown with the Br444, a total of 42 acres; while fields 4, 5, 6, 7, 8, and 10 were sown with F<sub>7</sub>-10 - a total of 36 acres.

Sowing of cowpeas for the cropping season commenced on July 8. This was done in collaboration with NARI. Sowing was done manually, where holes were made at a distance of 15cm and 20cm apart in rows 60cm apart, using a peanut planter. 2-3 seeds were then dropped in these holes by one person, while another covered the seeds.

### **Participation of Villagers**

The villagers participated in the clearing of the land, the cleaning of the bean seeds, the broadcasting of the seed paddy and of fertilizer, and the sowing of bean seeds.

The adult villagers as well as the primary school children assisted in the manual removal of weeds, which were pulled out; a process that facilitates high soil moisture.





Worker preparing land







Moco Moco villagers participating in sowing of paddy



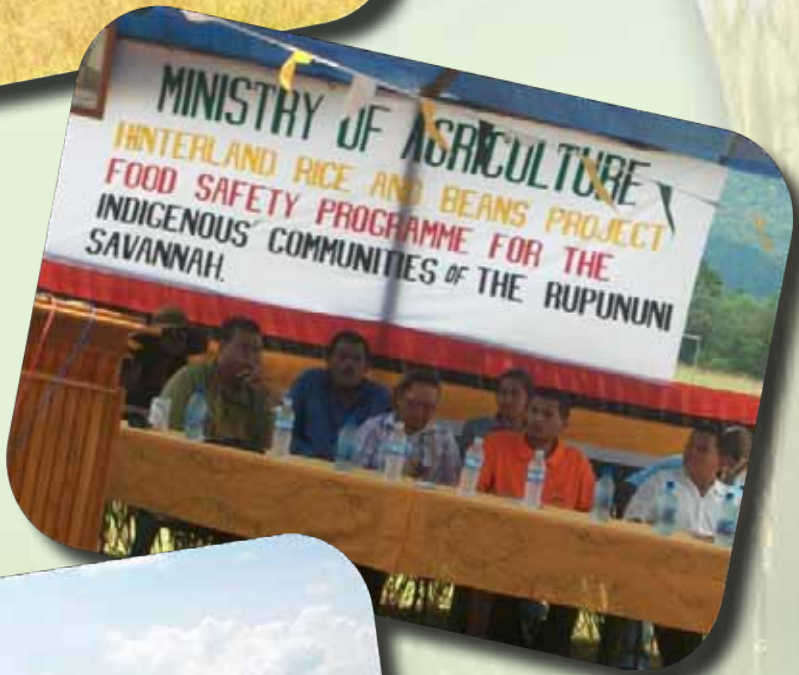
Rice fields at the end of May







Combine harvester in progress



Honourable Minister of Agriculture, Mr. Robert Persaud, and Honourable Minister of Amerindian Affairs Ms. Pauline Sukhai at the harvesting ceremony



Honourable Minister of Agriculture, Mr. Robert Persaud, and visitors witnessing the harvesting





## Finance Report

### A. DETAILS IN REVENUE EARNED

	ACTUALS			2010	
	2007	2008	2009	ACTUAL	BUDGET
Sale Commissions	297,818	279,629	268,185	440,837	270,385
Seed Paddy Sales	48,311	119,116	92,843	68,859	80,000
Income from Investment	201	196	152	2,069	400
Licences - Mill	3,334	6,415	6,250	6,855	5,000
- Export	575	3,625	4,650	4,100	6,000
Grading & Inspection	412	396	239	289	-
Wharfage & Moorage	2,758	1,168	9	-	-
Gain on Exchange	35	53	118	376	100
Miscellaneous	8,387	13,285	19,464	7,769	2,000
Cleaning of Seed Padi	-	-	-	96	-
By Products	476	947	1,347	1,373	500
ASSP	5,545	-	34,105	47,646	8,850
<b>TOTAL</b>	<b>367,852</b>	<b>424,830</b>	<b>427,362</b>	<b>580,269</b>	<b>373,235</b>

Revenue for the period under review is above the budget by G\$207.1M. There was a 63% increase in sales commission, and a 38% increase in funds received from ASSP.

### B. CURRENT EXPENDITURE

Current expenditure for the period under review was G\$82.1M or 21.7% above budget. This is due to an increase in employment cost, in addition to the payment of severance benefit for thirty-three employees.

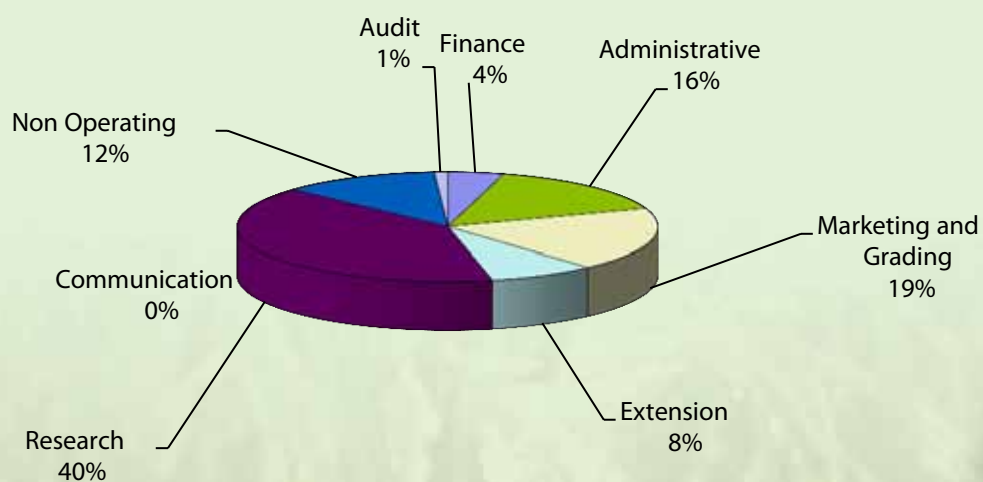


## **I. DIVISIONAL EXPENDITURE**

**Table 2: Showing Divisional Expenditure for the year in review.**

<b>DIVISION</b>	<b>G\$'000</b>	<b>%</b>
Finance	19,568	4
Administrative	69,748	15
Marketing and Grading	85,483	19
Extension	37,203	8
Research	183,095	40
Communication	-	-
Non Operating	55,199	12
Audit	4,682	1
<b>TOTAL</b>	<b>454,978</b>	<b>100</b>

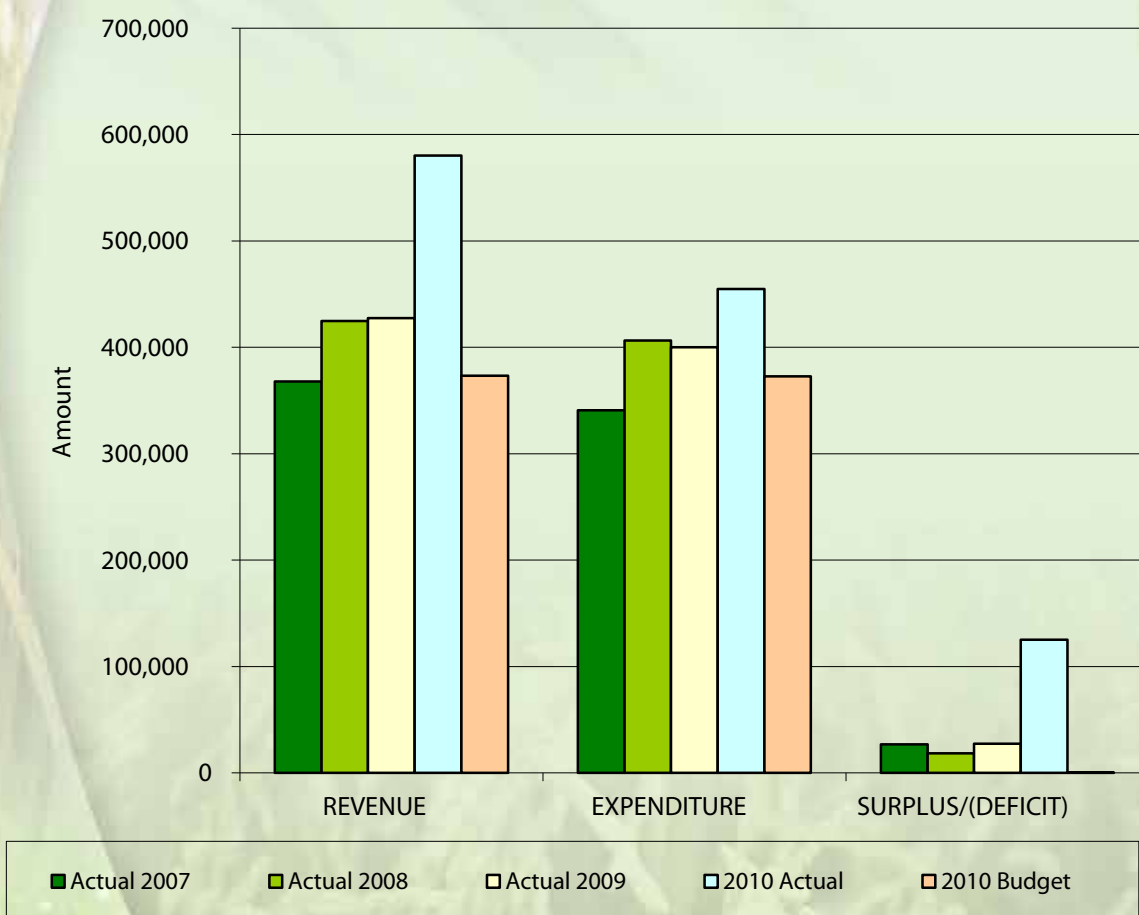
### **Divisional Expenditure**





**FINANCIAL PERFORMANCE**

PARTICULARS	ACTUAL			2010	
	2007	2008	2009	Actual	Budget
REVENUE	367,852	424,830	427,362	580,269	373,235
EXPENDITURE	340,958	406,365	399,995	454,978	372,776
SURPLUS/ (DEFICIT)	26,894	18,465	27,367	125,291	459

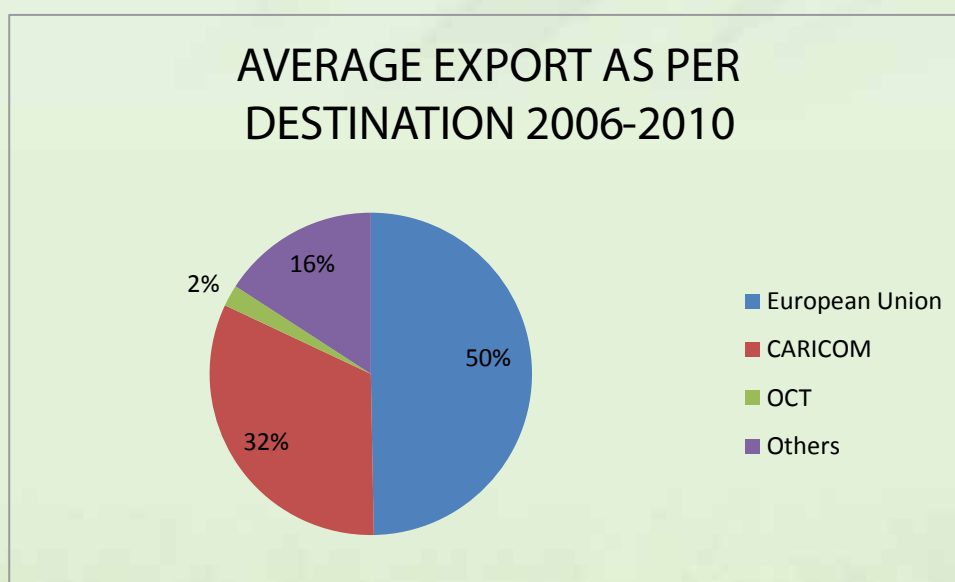
**Financial Performance**

The corporation recorded an operating surplus of G\$125,4M, which is an increase of \$97.9 M above 2009. The increase reflected was mainly due to an increase in exports and export commission for 2010.



## Export & Trade Facilitation

2010 was a landmark year for the rice industry, during which rice exports exceeded 300,000 mt and earned more than sugar for the first time in the history of Guyana. We all can be proud of this achievement, as this industry was developed by our fore-parents, who came to British Guiana as slaves and indentured immigrants. Over the years the industry has benefited from two preferential markets, the Caribbean Common Market (CARICOM) and the European Union (EU). In 2010 we have seen some changes as it relates to trade to the EU. It was the first time our exports had no quota or levy restriction. This restriction was removed from the trade within CARIFORUM countries; with Guyana and Suriname being the only exporters of rice from this group. The Pie chart show the average exports as per trading blocs for the last five years.



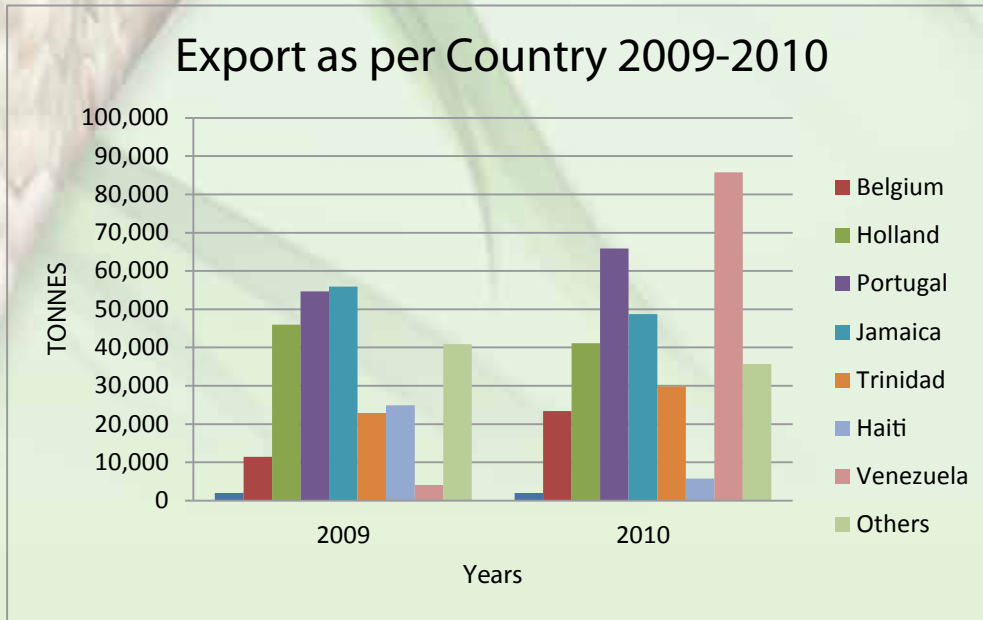
CARICOM markets continued to be a challenge as the major competition is highly subsidised rice from the USA. The trade facilitation agreement with Jamaica for the importation of 65,000 mt of paddy, free of the common external tariff (CET) has ended. Despite this we are still seeing requests by member states to extend this and, at the same time, for the importation of rice from extra-regional sources.

Guyana's exports for 2010 have surpassed all the previous records in both volume and value. The exports for the year is 336,313 mt, the highest volume; and this is approximately 18% above the previous highest of 285,051 mt in 1997. The export value also experienced a similar result; the export value of US\$151,321,890 was approximately 28% above the highest, in 2008. Of significance was the signing and execution of two contracts for the supply of rice and paddy to the Bolivar Republic of Venezuela. The major destinations for Guyana's rice continue to be Jamaica, Portugal and Holland, with the recent addition being Venezuela.





The table below shows the exports for the major destinations for Guyana’s rice for the last two years.



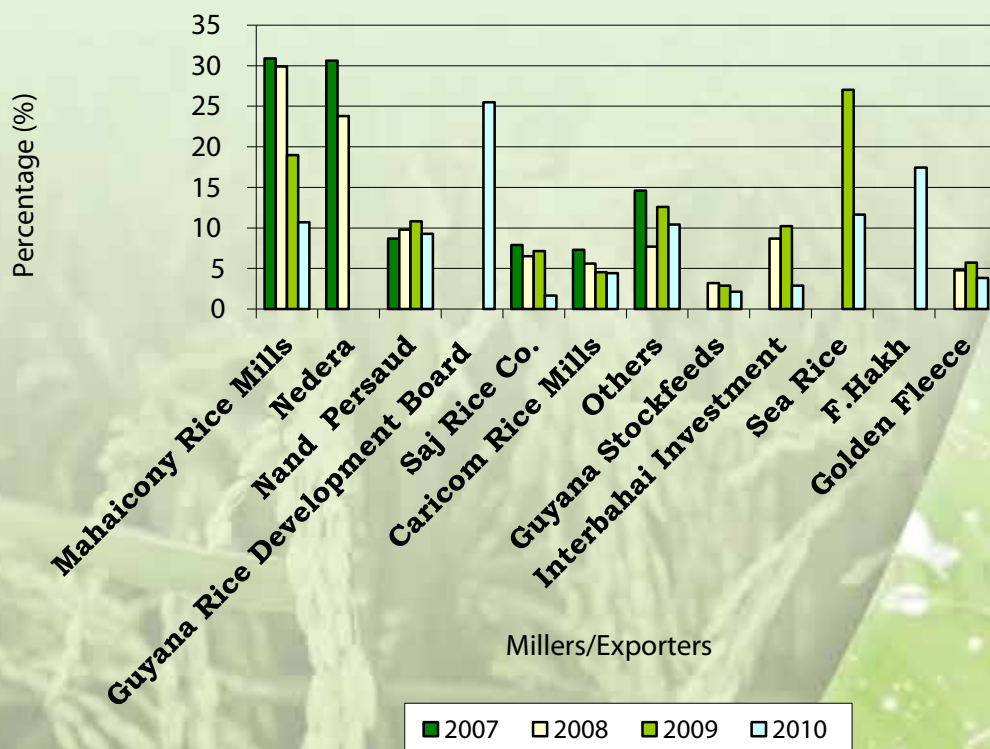
Most of the millers have completed paying farmers, but Mahaicony Rice Mills (MRL) continues to be the most challenging. The maturity of the industry was tested when two farmers took the payment challenge to the courts and a temporary resolution was negotiated as a result. The Ministry of Agriculture and GRDB continue to work with the stakeholders to ensure that the system of sale and purchase is transparent and in the spirit of free trade. The farmers should not be treated as the revenue base of the industry. It is time that MRL takes the necessary steps to ensure that farmers are paid in a timely manner so that they can return to the fields with adequate financing for the crop husbandry inputs, etc.



**EXPORT MARKET SALES**

EXPORTERS	2007	2008	2009	2010
Mahaicony Rice Mills	30.9	29.9	18.98	10.71
Nedera	30.6	23.8	-	-
Nand Persaud	8.7	9.8	10.83	9.28
Guyana Rice Development Board	-	-	-	25.50
Saj Rice Co.	7.9	6.5	7.15	1.68
Caricom Rice Mills	7.3	5.6	4.55	4.44
Others	14.6	7.7	12.6	10.43
Guyana Stockfeeds		3.2	2.9	2.14
Interbahai Investment		8.7	10.24	2.88
Sea Rice			27.04	11.64
F.Hakh	-	-	-	17.45
Golden Fleece		4.8	5.71	3.85
				100

Listed above are the percentages of total exports for the period 2007-2010. GRDB has the highest level of exports of 25.5%, followed by F. Hakh Rice Mills at 18.98%, Sea Rice - 11.64% and Mahaicony Rice Mills at 10.71%.

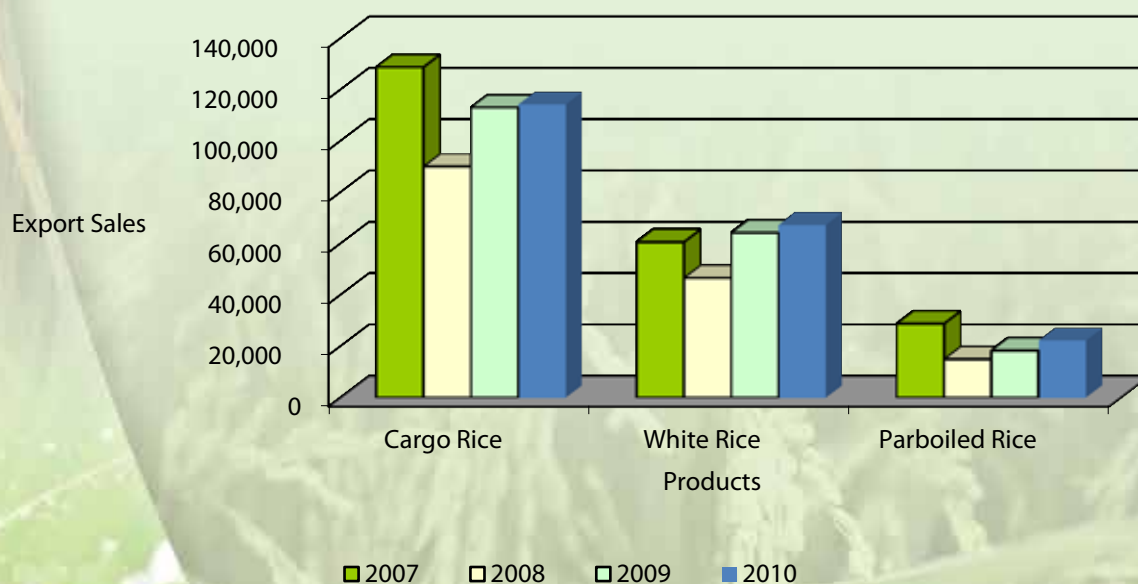
**Exports for 2007-2010**



**B. EXPORT SALES AS PER PRODUCT**

PRODUCT	ACTUALS			2010	
	2007	2008	2009	ACTUAL	BUDGET
Cargo Rice	128,764	89,915	113,027	114,168	99,300
Cargo Broken	3,968	5,190	8,068	13,445	11,530
White Rice	60,814	46,771	64,405	67,479	70,740
White Broken	26,126	18,471	31,309	31,733	10,900
Parboiled Rice	28,881	15,017	18,408	22,275	24,600
Parboiled Broken	2,097	2,483	2,601	3,316	4,250
Cargo Parboiled Rice	11,360	9,300	5,198	5,168	14,700
Pkt Parboiled Rice	2,126	119	1,275	8,410	820
Padi	-	36	5232	63559	-
Bran	2,586	545	2,061	3,218	-
Others	2,714	8,385	9,231	3,542	-
<b>Total</b>	<b>269,436</b>	<b>196,232</b>	<b>260,815</b>	<b>336,313</b>	<b>236,840</b>

From the table above, Cargo Rice exported from the period under review represents 34% of the total, followed by White Rice 20%, Padi 19%, White Broken 9% and Parboiled Rice 7%.



Cargo Rice, Cargo Broken, Parboiled Rice, Pkt Parboiled Rice, Paddy, Bran and other product exports exceeded budget level respectively, whilst there is a shortfall of the remaining products compared to the budget.



## Extension Division

The extension services of the Guyana Rice Development Board continued to execute its programme in the four thematic areas during the year, viz.

- I. Seed Production and Marketing
- II. Technology Transfer
- III. Data Collection and Information
- IV. Special/Supporting activities

The above were aimed at empowering the farmers with the knowledge to improve their crop management capabilities, thus allowing them to become better and more efficient producers of rice.

### 1. Seed Production and Marketing

#### a) Marketing of seed produced at Burma Rice Research Station

Seeds produced by the Burma Rice Research Station and approved for sale were distributed by the extension division to targeted farmers and contract growers in the various rice growing regions. In this regard, a total of nine thousand, five hundred and eighty-eight (9,588) bags of seed padi were distributed to farmers during the spring and autumn crops.

V A R I E T I E S (Bags)											
Region	Rustic	G98 22-4	G98 30-3	F710	BR444	G98 196	Diwani	G98 135	GRDB 9	GRDB 10	Total
2	206	295	-	-	-	-	-	297	23	298	1,119
3	187	253	121	110	144	76	89	581	34	290	1,885
4&5	654	223	183	267	878	172	579	1179	41	315	4,835
6	225	131	77	68	75	79	70	638	5	289	1,749
<b>Total</b>	<b>1,272</b>	<b>1,338</b>	<b>381</b>	<b>445</b>	<b>1,097</b>	<b>327</b>	<b>738</b>	<b>2,695</b>	<b>103</b>	<b>1,192</b>	<b>9,588</b>

#### b) Monitoring the performance of Burma Rice Research Station Seed Padi

The division routinely makes checks on fields sown with seeds purchased from the Burma Rice Research Station to ascertain performance, in terms of germination and establishment during the early stages of growth. Towards this end approximately two thousand three hundred and forty-six (2,346) acres were inspected.

#### c) Monitoring of Seed Fields at Burma Rice Research Station

At the Research station seed fields amounting to eight hundred and seventy-two (872) acres were inspected during the various growth stages of the crop. Based on the findings, the necessary corrective actions were taken to bring the fields in conformity with the production





of the specified class of seed.

#### **d) Monitoring/Certification of farmers' seed production**

Fields grown with seeds supplied by the research station are routinely inspected so as to ensure that the intended class of seed is produced after multiplication. About seven thousand, one hundred and sixteen (7,116) acres met the requirements for seed as a result of this exercise.

## **2. Technology Transfer**

#### **a) Developing Competency of extension staff**

Extension Officers were continuously exposed to training that were relevant and impact positively in the execution of their duties. These included management of pesticides, extension education and post-harvest management of padi and agronomy of rice. Training on HIV/AIDS related issues were also factored in the training programme.

#### **b) Technology Transfer**

Empowerment and education of farmers on the benefits of improved technologies continued to receive intense focus during the year. Focus groups in the form of Farmers' Field Schools continued to be the main strategy to train farmers. Training in Regions 3, 4 and 6 was financed under the Agriculture Sector Support Programme and 2 and 5 by the Guyana Rice Development Board

A total of thirty eight (38) Farmers' Field Schools (FFS) were established throughout the country and eight hundred and seventy eight farmers participated in the sessions.

<b>Region #</b>	<b># of Schools</b>	<b># of Participants.</b>
2	5	72
3	7	143
4	3	132
5	7	183
6	16	348
<b>Total</b>	<b>38</b>	<b>878</b>

As part of the training programme, other activities were held, which complemented the formal Farmers' Field School sessions. These included end of season reviews (8), field days and exchange visits (8). Three thousand (3,000) Farmers' Training Manuals covering various aspects of rice production were distributed to farmers.

A total of seventy-seven (77) soil samples were collected from farmers' fields and sent to Agroservices International for analysis.

The establishment of the on-farm programme (AYT trials and promising lines) in farmers' fields continued with the involvement of research and extension staff, working together with and collaborating farmers.



### 3. Data Collection

Data collected included those on crop production, namely; harvesting, sowing, pest and disease levels, drainage and irrigation status, fertilizer use and costs, and prices for seed padi.

The department prepared and submitted, two hundred and sixty (260) weekly and sixty (60) monthly reports. Specific reports (1) on schoonord grass levels and cost of production (1) were also compiled for each crop.

A survey was done to determine the amount of farmers who suffered losses as a result of the El Nino weather patterns during the spring crop. The information was used in the provision of assistance by the Government to the affected farmers.

A database comprising of all farmers and their respective acreage sown was completed during the year.

### 4. Special Activities

These are unplanned activities that the division is called upon to perform from time to time. They are of a complementary nature and support regular extension activities.

Activity	Host	Regions	No. of Days
Mill monitoring	GRDB	All Regions	96
Exhibitions	GRDB	Region 2	2
Exchange visits	GRDB	All Regions	8
Minister /other senior officials visits	MOA, GRDB, RPA	All Regions	11
Investigation	GRDB, RPA	All Regions	48
Farmers' Meetings/ GRDB outreach	RPA, GRDB	AllRegions	77
Meetings/Ministry outreach	MOA, GRDB	All Regions	58
Flood surveys	GRDB	Regions 2 & 3	8
Opening of De William, Armersfort and Mary's sluice	NDIA,GRDB & MOA	Regions 3,4 & 5	3
Commissioning of drying floors	GRDB, RPA & MOA	All Regions	9
Commissioning of Hope/Duch Four Canal	MOA, GRDB, NDIA	Region 4	1
Training of extension staff	GRDB	All Regions	6
Pesticide training	GRDB, Pesticide Board	Regions 4 & 5	5
El Nino , padi bug surveys	GRDB,RPA	All Regions	138
Distribution of vouchers, chemicals	GRDB,RPA	All Regions	22





Exhibitions included GUYEXPO, Berbice EXPO, Essequibo Nite and Regional Exhibitions.

Community assistance is related to distribution of El Nino relief vouchers for seed padi and fertilizer. Chemicals were given to farmers in region 5 who were affected by padi bug..

Investigations were in the areas of damages to structures, flooding and blocked kokers, breaches of sea defence and pest and disease outbreaks.

Farmers' meetings were initiated, both by the GRDB and MOA. They dealt with issues relating to padi bug control, marketing of the padi, with the latter specifically dealing with payment for padi sold to mills. Drainage and irrigation, flooding, accessibility of dams, cattle damage were also other issues raised at these meetings.

Other meetings attended included those with senior officials of all agencies.



## Research Highlights for 2010

The Rice Research Station is concentrating its efforts in developing high-yielding varieties (>6.5 t/ha) with tolerance to lodging, stable resistance to blast, high milling yield (HRR 55/TRR 70), excellent cooking qualities. Efforts are also being made to evolve aromatic and salt tolerant meters. Attempts are in place to develop a package of practice with respect to weed management, water management, seeding density, plant nutrition and other agronomic methods for the release of new varieties and specific locations. Also, providing remedies to short-term problems or situations such as salinity, acidity, crop nutrition etc. are also areas of focus. Further, screening of germplasm and breeding lines for tolerance/resistance to various pest and diseases and monitoring resistances are done. Evaluating new pesticides (insecticide, fungicide, and herbicide) for possible use in the rice industry is a seasonal routine. Monitoring for disease incidence and insect populations, timely advisory and training to farmers are also crucial activities carried out. Maintaining genetic purity of commercial varieties and production of sufficient quantity of seeds of high genetic purity is a priority for the Station. Research was conducted under five major disciplines that are highlighted below.

### A. Plant Breeding

#### 1.0 On Farm Trials (OFT)

This department continued on-farm testing and analysis during the first and second crops of 2010 of the two new varieties viz. GRDB 09 and GRDBFL 10 revealed stability in their superiority over the other commercial varieties being grown. The grain yield performance over the two seasons for GRDB 09 and GRDBFL 10 were 6.3 t/ha and 7.0 t/ha respectively, which represented a 10 % and 18 % advantage over their corresponding check varieties. The GRDBFL 10 showed improvements in its tendency to lodge in some of the larger plots (5-15%), due to farmers' adaptation to key agronomic practices which enhances crop performance. The GRDB 09 maintained an excellent lodging characteristic. Both of the new varieties retained desirable milling and cooking qualities and resistance to disease.

Two other candidate varieties were identified, which are currently being tested intensively and should be promoted to the OFT in autumn 2011.

#### 2.0 Advanced Yield Trials (AYT)

Twelve promising early duration (< 110 days) strains were tested, along with two checks (G98-196, FG05-259) in a randomized block design, with three replications at four locations viz. Rice Research Station, Black Bush Polder, Essequibo, and West Demerara (only in the 2nd Crop). Strain FG06-98 was promoted for further testing at a semi-commercial level in the first and second crops of 2010. Another twelve strains of medium duration (>110 days), along with two checks (GO4-08 and G98-135), were analyzed. The experiment was laid out in a RBD with three replications at the same four locations. Two strains (G07-2, FG 07-35) proved superior to other strains from this trial and were promoted for further testing at a semi-commercial scale in first and second crops of 2010.

#### 3.0 Observational Yield Trial (OYT)

Initial assessments of new materials for yield potential and other important characters were conducted in an observational yield trial at the Rice Research Station. Forty-five strains were studied along with three checks in an augmented design over two seasons. Strain FG07-50 was promoted for further testing in the advanced yield trials during first crop 2011.





#### **4.0 Breeding Material**

Seventeen F2 populations were studied during the first crop of 2010 and 233 single plant selections were taken; similarly in the second crop. 58 populations were studied and 973 selections were taken. During the first season 4214 progenies (F3 to F9 generation) were studied in pedigree nurseries and 1711 selections were taken. In the second season 1944 progenies were evaluated and 1900 single plant selections were taken. Three strains were bulked (in the second season) and promoted for initial yield testing in the first season in 2010.

#### **5.0 Creating Variability and Raising F1 Generation.**

One hundred and twenty-three crosses were made during 2010 (58 in first crop and 65 in second crop). Hybridization aimed at creating variability for increasing yield potential (75), salt tolerance (24) and aroma (24). Fifty-nine crosses that were made in the second crop of 2009 were advanced in the first crop of 2010. The crosses made in the first crop were successfully raised in the second crop of 2010. Those made in the second crop will be raised in the first crop of 2011.

#### **6.0 Seedling Emergence Study**

Studies were conducted during the first and second crops of 2010 to test the general performances of three new strains' and older varieties' ability to emerge from varying water depths. Of the eight entries studied, (GRDBFL 10, GRDB 09, FG 05-298, G98-30-3, Rustic, FG06-98, G07-2, FG 07-3,) all showed good to excellent emergence from the 6 inches (15.2cm) and 3 inches (7.6cm), respectively. All of the entries studied showed fair emergence from 9 inches (22.8cm) of water.

#### **7.0 Germplasm Management**

Seven hundred and eighteen accessions were rejuvenated in the second season of 2010. Seventy seven accessions were received from the International Rice Research Institute during the second season; these will be multiplied during the first season of 2010. Two hundred and eighty three entries were received from FLAR during the first crop of 2010.

#### **8.0 Strain Purification**

Three hundred sixty strains were purified during the autumn 2008 season. These lines were grown in progenies rows (10-25 progenies per strain) for the purpose of purification during the first season. Attempts are still being made to purify a promising strain (FG05-298) before its entrance into the on farm trials.

#### **9.0 Maintenance Breeding and Seed Production**

Progenies (more than 6000) of all the varieties were grown and studied during both seasons of 2010. The genetic purity of the varieties was maintained and fifteen thousand selections were made. More than 4000 kg of pre-basic seed (for all the varieties) were produced over the two seasons of 2010. During the year 2010, 5.2 tonnes of basic seed were produced from seven varieties (Rustic, G98-22-4, G98-196, 98-30-3, G98-135, G 04-08, FG 05-259) at the Rice Research Station. Seed generated here were supplied to the seed production unit of the research station for multiplication and subsequent distribution to farmers.





## B. Agronomy

### 1.0 Evaluation of Herbicides for Post-Emergent Weed Control in Rice

Field trials were conducted in both seasons of 2010 to evaluate Spada 60 DF against other herbicides and as tank mixtures to determine its efficacy against grass weeds in rice. Results indicated that Spada 3.72 kg fbSpada 3.72 kg ha<sup>-1</sup> (1st application 1-2 leaf stage of weed then repeat 12 days after 1st application) gave significant reduction on weed population and weed-dry matter at maturity, thus resulting in high-weed control efficiency. The reduced competition between crop and weeds resulted in significant increases in grain yield. This increase in grain yield was evident due to significantly better yielding parameters. When Spada 3.72 kg ha<sup>-1</sup> is being applied twice (12 days interval) this caused reduction in those weeds that escaped the first control application and then subsequent germination. Spada 3.72 kg ha<sup>-1</sup> showed slight phyto-toxicity to the crop, but it recovered fully within five days without any reduction in grain yield. Spada proved very good for the control of *E. glaberescens*, which is currently the number one weed in Guyana of economic importance. Evaluation of Ricestar and Estalion require further testing.

### 2.0 Evaluation of Advance Breeding Lines Under Varying Nitrogen Levels

Field trials were conducted over the past two seasons at RRS, Burma and Black Bush Polder to evaluate five advanced breeding lines (G04-08, FG05-259, FG06-98, G07-2 and FG06-35) under four levels of nitrogen (75, 100, 125 and 150 kg ha<sup>-1</sup>). Results indicated that at both locations no significant differences in grain yield were observed at increasing levels of nitrogen application ( $R^2 = -0.022$ ). Average grain yield lies between 4.6 to 5.2 t ha<sup>-1</sup> (29 to 33 bags ac<sup>-1</sup>), where the 75 kg N ha<sup>-1</sup> treatment produced the highest grain yield of 33 bags ac<sup>-1</sup>. It can be recommended that 75 kg N ha<sup>-1</sup> (1.5 bag of urea) is sufficient to obtain high grain yields for the advanced breeding lines tested. Applying 100 kg N ha<sup>-1</sup> or more resulted in excessive vegetative growth and lower harvest index, in addition to increased lodging, and predisposes the plants to fungal diseases.

### 3.0 Evaluation of Advanced Breeding Lines Under Varying Seeding Densities

Field trials were conducted over the past two seasons at RRS, Burma and Black Bush Polder to evaluate five advanced breeding lines (G04-08, FG05-259, FG06-98, G07-2 and FG06-35) under four seeding densities (90, 112, 135 and 157 kg ha<sup>-1</sup>), i.e. (80, 100, 120 and 140 lbs ac<sup>-1</sup>). It was observed that increasing the seeding density did not significantly increase the grain yield. Rather, a decreasing trend was observed ( $r = -0.98$ ). This observation is in accordance of older varieties that were evaluated earlier e.g. BR 444, Rustic, G98-22-4 and G98-135, etc. Increasing the seeding density increases plant population but, at the same time, reduces the grain yield attributes, such as number of filled grains, 1000-grain weight. Higher plant population causes competition between rice plants and causes them to grow shorter; and more vegetation which can lead to fungal diseases to occur, and lodging. It is recommended that lower seeding density be used (80 to 100 lbs ac<sup>-1</sup>) when field conditions are ideal (good land preparation, level and free from weeds and insect pests). Using lower seeding density will also directly lower your cost of production.

### 4.0 Comparing the Efficacy of Deep Placed Urea Briquettes Against Prilled Urea Broadcasted at Similar Levels of Nitrogen for Growth and Grain Yield of Rice

Field experiments conducted, using deep place briquettes before sowing, and compared to similar levels of nitrogen using prilled urea revealed that urea briquettes showed better response compared to prilled urea application at similar levels of nitrogen. Due to slow releasing nature of the briquettes plants tend to remain green for a longer period. The 84 kg N ha<sup>-1</sup> treatment showed best response to grain yield and yield parameters as compared to other





rates of briquettes and rates of normal urea. Nitrogen in the form of briquettes, at 84 kg N ha<sup>-1</sup> seems to provide adequate amounts of nitrogen for high yields.

### **5.0 Effect of single or split application of nitrogen on grain yield of rice**

A field experiment was carried out to determine the appropriate timing and amount per timing of nitrogen to obtain high grain yield. The results indicated that when nitrogen was applied all at once before or after sowing, two splits or three splits there was no significant influence on grain yield. Grain yield ranges from 3.7 to 4.4 t ha<sup>-1</sup> (23.6 to 28.1 bags ac<sup>-1</sup>), with the two splits at 21 and 42 DAS gave highest yield of 4.4 t ha<sup>-1</sup> (28.1 bags ac<sup>-1</sup>) followed by three splits  $\frac{1}{4}$ ,  $\frac{1}{2}$  and  $\frac{1}{4}$  at 21, 42 and 60 DAS respectively yielded 4.3 t ha<sup>-1</sup> (27.5 bags ac<sup>-1</sup>). Splitting the total nitrogen and applying it at the three critical stages of the crop produces the highest grain yield.

### **6.0 Effect of seed treatment agents on seedling emergence and growth under various water depths**

A pot trial conducted to evaluate various products as seed treatments under various water depths revealed that Crusier, Fipronil and Nano-grow showed significantly more emergence (63.6, 62.5 and 59.4%) than Evergreen (49.5%). None of the products showed any influence on plant height. In terms of water depth there were progressive (significant) decreases in emergence, plant height, root length, and crop dry matter production with increasing water depth.

### **7.0 Demonstrations**

Several demonstrations were carried out during the past year, which includes Schoonord grass control, seeding density and improved management practices. These demonstrations were well received by farmers and have been adopted throughout the country.

### **8.0 Training**

Extension staff and some research technicians were trained in the areas of weed management, nutrient disorder and management, principles of fertilizer application and correction of problematic soils. The theoretical training sessions were conducted in classrooms where reading materials were provide, these sessions were then followed by field activities.

## **C. Pathology**

Rice disease is considered to be one of the most important biotic and abiotic factors that affect rice cultivation and its productivity. Blast disease, *Pyriculariagrisea*, commonly affects one of the predominant varieties-Rustic, and therefore effort in varietal improvement have been focused on screening progenies derived from crosses where at least one parent is known to have field resistance to blast in Guyana. Screening for blast has been conducted at multiple hotspots, while the monitoring of various rice diseases was done at the Rice Research Station Burma and farmers fields.

### **1.0 Evaluation Of Breeding Lines/Materials for Blast Disease (*Pyriculariagrisea*).**

During the first crop (Spring) of 2010, there was excellent germination and establishment of the blast nurseries at various locations. However, the 'El Nino' phenomenon that Guyana faced caused the environmental conditions to be less conducive for disease development, thus was one of several main factors affecting the disease triangle, even though fungal (blast, brown spot) pathogen was present. There were no symptoms of blast on susceptible (rustic) checks, therefore scoring was not meaningful.





There were some levels of disease observed at the Crabwood Creek location, where the conditions were slightly different than at the other locations. Out of the 104 lines screened, 73 lines came out to be highly resistant, 6 resistant, 7 moderately resistant, 5 susceptible and 6 highly susceptible, while 7 did not germinate.

While in the second crop, 2010 had excellent conditions for the disease triangle to be at its fullest. There was excellent germination and establishment of the blast nurseries at all the locations. At VON BETTER, out of the 1985 test entries sown, one was highly resistant, 788 resistant, 518 moderately resistant, 516 and 136 were susceptible and highly susceptible, respectively. At the other locations 80 entries/lines were evaluated. Blast reaction at Crabwood Creek, Timehri and Black Bush Polder indicated that 31, 40 and 45 test entries were resistant, with 26, 15 and 10 moderately resistant, respectively; all other entries were either susceptible or highly susceptible.

## **2.0 Fungal Disease Monitoring on Seed Production Fields at Rice Research Station 2010**

Monitoring of seed production fields at the Rice Research Station Burma showed the presence of blast disease, *Pyriculariagrisea*, with scores ranged from 2–4 (on Rustic), sheath blight (*Rhizoctoniasolani*) ranged from 0-3, brown spots (*Helminthosporium*) scores ranged from 2–6. No incidence of sheath rot (*Sarocladiumoryzae*) was observed. Scoring was done according to the Standard Evaluation System (SES) for Rice, (INGER, 2002).

## **3.0 Training of New Employees/Extension Officers on Disease Identification.**

In 2010, through continuous training programmes, all new employees, GRDB and RPA extension officers from the various regions, as well as some other departmental members of the research division, GRDB were exposed to the Rice Disease Recognition And Management Training, with the theoretical session on the various rice diseases, both major and minor, affecting the rice crop in Guyana conducted in the Board Room of the Rice Research Station; while the practical sessions were conducted in the Seed Production Plots of GRDB and the Hot Spot location at Von Better, West Coast Berbice. Over 150 participants benefited from these training sessions.

## **4.0 Screening New/All Available Fungicide for the Control of Fungal Pathogens in Rice.**

During the first crop in 2010 no evaluation work was possible under the field conditions because the 'El Nino' phenomenon that Guyana faced caused the environmental conditions to be less conducive for disease development. There were no symptoms of disease observed on susceptible (rustic) checks in this trial under the field conditions, therefore screening was not meaningful. In the second crop, 2010 screening work was done, using a new/available molecule Stratego at 5 rates (0.5, 0.7, 1.0, 1.25, and 1.5 liters / hectare), along with a 0 control and the recommended rate of Fugi-one (0.5–0.75 liters / hectare). There were no significant differences among the different treatments. The highest level of disease was observed in the 0 control. This trial needs to be repeated for at least two more seasons.

## **5.0 Evaluating the Incidence of Various Diseases, (*Pyriculariagrisea*; *Helminthosporiumoryzae*; *Rhizoctonia solani*) etc on Rice Varieties/New Lines and Their Impact on Yield.**

There were 32 entries and 36 entries evaluated in the Disease Severity Study at the 'hot-spot' location at Von Better, in the first and second crop of 2010, respectively. These comprised of advanced breeding lines and commercial varieties. In the first crop of 2010 the disease pressure was a bit low due to the prevailing El-Nino condition; nevertheless there was blast disease, *Pyriculariagrisea*, scores ranged from 1–2, sheath blight (*Rhizoctonia solani*) ranged





from 1-7, brown spots (*Helminthosporium*) scores ranged from 1– 6; while few entries recorded incidences of sheath rot (*Sarocladium oryzae*) with score 1. In the second crop of 2010, slightly higher levels of disease were recorded, where the blast disease, *Pyricularia grisea*, scores ranged from 2–3, brown spots (*Helminthosporium*) scores ranged from 4–9, sheath rot (*Sarocladium oryzae*) scores ranged from 0-5, and all entries recorded a score of 2 for sheath blight (*Rhizoctonia solani*). All scoring was done according to Standard Evaluation System (SES) for Rice, (INGER, 2002).

## **6.0 Laboratory culture and diagnosis of rice diseases.**

The department collaborated with NARI and the University of Guyana (Berbice) to do some laboratory culture and diagnosis of the various fungal diseases of rice in Guyana. The following fungal pathogens brown spots (*Helminthosporium spp.*), sheath blight (*Rhizoctonia solani*), sheath rot (*Sarocladium oryzae*) were successfully isolated, cultured and identified from the disease samples.

## **D. Entomology**

During 2010, entomological investigations focused on establishing trends of peak insect pest activity, screening of improved (novel) insecticides against the early season pests (leaf miner – *Hydrellia*, water weevil – *Helodytes foveolatus*, caterpillar – *Sopdoptera frugiperda*) and paddy bug (*Oebalus poecilus*), evaluation of advanced breeding lines for resistance/tolerance, and seed paddy storage pest control. Training of farmers in controlling of the paddy bug was also an intensive and extensive activity, since this noxious pest invaded rice cultivated areas at a level of infestation that was threatening.

### **1.0 Monitoring**

In order to determine periods of peak pest activity, monitoring was done daily in collaboration with the Seed Production Unit at the Rice Research Station in cropped areas only, from heading to 10 days before harvesting. There were very high incidences of paddy bugs in the fields for both the first and second crops (15 % out of the total organisms caught). This was a result of field sanitation during the seasons not being up to standard providing the bugs with breeding sites. Monitoring revealed that this pest invaded rice fields just at the onset of heading as they are attracted to the aroma, which is released during this growth stage. Damage due to paddy bug began from damage to the flower, which produced sterile grains through to the milk and dough stages, which produced wind, or half-filled grains and pecky grains, respectively.

### **2.0 Insecticidal Application**

Foliar screening was done for Regent, Muralla Delta, Ninja, Regent and Admistar against the early season pests and paddy bug to determine their efficacy at the small plot and semi-commercial levels in the first season. The results of these tests were compared with the usage of Pronto, as well as the system of control, where no insecticide was used. Only the Regent and Muralla Delta at the recommended rate proved to be effective against the early season pests when compared to the system of control.

The first application of each treatment was effective in reducing the number of paddy bugs for each treatment, except for the control system. However, the bug population for the various treatments was still above the threshold level. Reinfestation occurred almost immediately and remained above the threshold level, even after the second insecticidal application, a consequence of population pressure of this pest. It should be noted that this scenario where the population pressure resulting from a high level of infestation that caused the treated areas to be reinfested, should not be used to condemn the products tested, since in such instances



it was concluded that there were outbreaks of paddy bugs across the rice-growing belt of the country.

Seed treatment studies focused on the effects of insecticides (Flip, Cruiser, Monarca, Jade, Pronto, and Regent) on the germination and post-germination stages of plant growth. Although the literature suggests that Fipronil may cause a delay in germination and establishment, it was concluded that that Flip (Fipronil) and Monarca (Trichloroprid) had a significant positive effect on the germination in variety F<sub>7</sub>-10, since they showed the longest length of radicle. Flip, Monarca and Cruiser also had a positive effect on the growth (vegetative and reproductive) of this variety.

### **3.0 Seed Paddy Storage Pest Control**

Studies initiated here focused on the use of Cruiser as a seed treatment product to protect paddy in the carry over stock from damage by rice weevil, *Sitophilus oryzae* and the *angoumois* grain moth, *Sitotroga cerealella*. Cruiser was tested at 0.5 ml, 0.75ml and 1.25ml per 1kg seed, along with the control system (no treatment). The rate of 1.25 ml/kg seed was most effective, although the lower rates also exhibited some level of protection.

### **4.0 Screening for host plant resistance**

The identification of resistant/tolerant lines against early season pests and paddy bugs is very compatible with the philosophy of IPM, since it will prevent the use of insecticides, thereby allowing for the build-up of natural enemies and reduce the cost of cultivation. Of the 21 advanced breeding lines screened all had various levels of damage caused by early season pests, and 20 of the lines had paddy bug damage greater the 15%, while 11 had damage greater than 20%.

### **5.0 Training of farmers**

This was done in all the rice-growing regions in an effort to equip farmers with the requisite knowledge, and advise them on the tools available for use in controlling paddy bugs; as well as to give technical support in attempts to bring the increased bug population under control. It was noted that although farmers are aware of the monitoring strategy, Integrated Pest Management, method of insecticide application and the optimum time of paddy bug activity, these are not generally practiced. Further training and interaction may prove to be successful in managing same.





## E. Seed Production Unit

The prime objective of the seed production unit is to produce sufficient quantity of high quality seed for farmers. During the year 2010 a total of 738 tonnes (11,599 bags) of seed was produce, from ten commercial varieties (see table below). This was distributed to farmers across the country.

S.N.	Variety	Seed Produced					
		Spring 2010		Autumn 2010		Grand Total	
		bags*	tonnes	bags	tonnes	bags	tonnes
1	Rustic	747	47.5	527	33.5	1274	81.1
2	Diwani	494	31.4	309	19.7	803	51.1
3	F7-10	350	22.3	243	15.5	593	37.7
4	BR 444	725	46.1	467	29.7	1192	75.9
5	G98-22-4	727	46.3	611	38.9	1338	85.1
6	G98-30-3	0	0	456	29.0	456	29.0
7	G98-135	1483	94.4	2059	131.0	3542	225.4
8	G98-196	0	0	347	22.1	347	22.1
9	G04-08	114	7.3	174	11.1	288	18.3
10	FG 05-259	826	52.6	940	59.8	1766	112.4
	<b>Total</b>	<b>5466</b>	<b>347.8</b>	<b>6133</b>	<b>390.3</b>	<b>11,599</b>	<b>738.1</b>

\* 1 bag =140lbs



## Quality Control Department

### 1.0 Introduction

This year was a very dynamic year within the Quality Control Department. Guyana signed two (2) contracts to supply paddy and white rice to Venezuela and it was mandatory for the department's staff to ensure that the rice and paddy supplied met all the criteria as set out in the contracts between the Governments of Guyana and Venezuela.

Notwithstanding, the quality of all rice, paddy and by-products being exported to other countries from Guyana had to be monitored and fumigated also in order that Guyana would maintain, or even improve their market-share in the rice trading community.

Monitoring of paddy intake at mills, licencing inspection and subsequent surveillance, as well as training of persons within the rice-growing community all fell within the purview of this department.

In fact, this year has been a very busy, fruitful and rewarding year for the department, with management's assistance and the co-operation of all the players within the industry.

Some of the achievements are highlighted below:

### 2.0 Mill Licensing

The licencing process commenced in January at a slow pace, culminating in the licencing of seventy two (72) mills.

Two (2) new mills were licenced during the year, one in Region 4 and the other in Region 5.

A total of 289.25mt of mill time is accounted for between the seventy two (72) mills.

N.B: A list of licensed mills is seen in the Appendix.

Table 1

Region	2	3	4&5	6	Total
No. Of licensed mills	16	17	18	21	72
Milling Capacity (Mt/h)	69.75	34.5	136.5	48.5	289.25mt/h

Breakdown of the milling capacity of licensed mills as per region

Table 2

Mill Type	Number in Operation
Buying Centre	3
Toll Mill	24
Milling Capacity Below 5mt	50
Milling Capacity 5 mt and above	22

#### Analysis of mills licensed

N.B ( i ) Toll mills are mills which mill paddy on behalf of farmers.

(ii) Buying centres purchase paddy only.

(iii) Buying centres and toll mills are all below 5mt and are included in that category





### 3.0 Staff/Offices

The department operates in all rice growing regions viz. Regions 2,3,4,5 and 6  
Staff complement is as follows.

Table 3

Regions	Research Assistants	Regional Superintendents	Regional Supervisors	Grading Officers	Technical Assistants
2	-	1	-	3	1
3	-	1	1	3	-
4	1	-	1	6	3
5	-	1	1	3	1
6	-	1	-	3	1
Total	1	4	3	18	6

#### Breakdown of staffing by Component

Staff operating within the department are all qualified; with first degrees from U.G./Cuba; and diplomas and certificates from G.S.A. Continuous training sessions are conducted during the year to ensure that all operating procedures are being followed countrywide.

Meetings are also held monthly (last Saturday in each month) between all heads managing the regional operations and the Quality Control Manager. Operational systems, queries, management reviews and instructions are dealt with during these meetings.

### 4.0 Training

#### (a) Stakeholder Training

Training in post-harvest management and grading was conducted during July and were held as per schedule below:

Table 4

Date	Location	Venue
July 6 - 8, 2010	Region 3	GRDB Office - Crane W.C.D.
July 13-15, 2010	Region 2	GRDB Office - Anna Regina, Essequibo
July 20 – 22, 2010	Region 4&5	GRDB Burma Rice Research Station
July 27- 29, 2010	Region 6	GRDB Office - Corriverton, Berbice

#### Breakdown of post-harvest Management and Licenced Graders' training courses 2010

#### (b) Staff Training

Ten (10) sessions of internal training on the grading procedures were conducted at the Central laboratory during 2010.

These training sessions were attended by staff from all of the Board's operating regional offices, in



keeping with the requirements of the Guyana National Bureau of Standards' mandate for certification of the Central laboratory.

Staff of the department also attended several other external training programmes held by the Guyana National Bureau of Standards.

## 5.0 Licenced Graders

Fifty-three (53) persons were trained as licensed graders during the reporting period as follows:

Table 5

Region	Number Trained
2	16
3	9
4&5	18
6	10

Number of persons trained as licensed graders by region

## 6.0 Laboratory Certification

The central laboratory was scheduled to be certified by the Guyana National Bureau of Standards (GYS 170), leading to the eventual certification to the International Standard (ISO 17025) during the first half of the year.

This did not materialize due to reasons beyond our control.

A final audit of the system is due to be done during the first quarter of 2011 which is expected to lead to certification.

## 7.0 Data Collection

The following data is routinely processed by the department

- I. Quality of paddy purchased at mills countrywide (paddy intake by grades)
- II. Prices paid for paddy by millers (paddy prices)
- III. Average prices, availability and quality of rice being sold on the local market (market survey)
- IV. Regional superintendents' monthly reports of operation in their respective regions.
- V. Fortnightly reports on stock levels at mills.

## 8.0 Monitoring of Paddy Intake at Mills

This operation continued during the spring and autumn crops. Thirteen (13) persons were employed temporarily in all the rice-growing areas. Staff were engaged in ensuring that the operations required during purchasing of paddy at mills were conducted as specified in the Rice Factories Act.

Staff members were rotated at the mills to try to reduce instances of collaboration. They were trained at the Central laboratory prior to being hired to conduct this operation on the Board's behalf.





### 9.0 Quality Control/Extension Collaboration

Staff of both departments worked together during the Field School Sessions in the region to disseminate information regarding Purchasing Practices at mills, payment schedule according to the Rice Factories Act as well as Grading Procedures and other relevant quality information.



Officer sampling paddy at bond



Testing moisture levels in the lab



Training personnel to grade during Liliendaal Grader's Training Course



Laboratory sheller



Loading operations at wharf





# Activities in 2010



The Bursary awardees and the management of the Guyana Rice Development Board



Mr. Jagarine Singh- General Manager, addressing the visitors at the Bursary Award Ceremony







Visitors at the Bursary Award Ceremony

Awarding of Certificate



Vote of thanks done by one of the students





GuyExpo 2010



Display of different types of packaged rice available for local and international markets.



Display of different types of rice dishes.







His Excellency President Dr. Bharrat Jagdeo and Honourable Minister of Agriculture Mr. Robert Persaud visit the GRDB Production booth.



The production booth showcasing the different growth stages of rice, the processing of Paddy to rice, the rice fish cultivation and the Hinterland Rice and Beans Project





## Distribution of Vouchers



Distribution of vouchers to farmers





# GUYANA RICE DEVELOPMENT BOARD

## *Heads Of Department*



**Mr. Madanlall Ramraj**  
Administrative/  
Deputy General Manager



**Dr. Mahendra Persaud**  
Plant Breeder



**Mr. Noel Sookhai**  
Internal Auditor



**Ms. Allison Peters**  
Quality Control Manager



**Mr. Bindraband Bisnauth**  
Farm Manager



**Mr. Peter Ramcharran**  
Accountant



**Mr. Kuldip Ragnauth**  
Extension Manager



## STAFF

### Head Office

General Manager

### Jagnarine Singh

Dip. Agriculture (GSA)  
B. Sc. Agriculture (UG)  
M. Sc. Marketing (U.A.R.K.)

### Administrative Department

Deputy General Manager

### Madanlall Ramraj

Master of Business Administration,  
(MBA) (British Columbia)  
Bachelors of Business  
Administration and Management  
(BA) Honors (Toronto)

Occupational Health & Safety Officer

Ella P. Issacs  
Dip. Occupational Health & Safety  
(UG)

### Finance Division

Accountant

Peter Ramcharran  
ACCA Level 1 & 2  
CAT

Assistant Accountant

Abigail Constantine  
CAT Cert.  
ACCA (Level) 2

Errol Chester  
Dip. Accounts (UG)

Internal Auditor

Noel Sookhai  
CAT  
ACCA

### Trade & Export Facilitation

Marketing Assistant

Gloria Chester  
B. Sc. Management (UG)  
Dip. Marketing (UG)

### Quality Control Division

Quality Control Manager

Allison Peters  
B. Sc. Agriculture (UG)  
Agriculture Diploma (GSA)





**Region 2**

Regional Superintendent

DevwattieDass  
B. Sc. Agronomy (Cuba)

Grading Officer

Ronsard Boodhram  
Dip. Agriculture (GSA)

Grading Officer

Kevin Joseph  
Cert. Agriculture (GSA)

Grading Officer

Kishan Indrawattie  
Cert. Agriculture (GSA)

Technical Assistant

Keshini Ramnarace

**Region 3**

Regional Superintendent

Julia Chunoo  
B. Sc. Biology (UG)

Regional Supervisor

Colleen Bailey-Arjune  
Cert. Agriculture (GSA)  
Cert. Supervisory Management  
(IDCE)

Grading Officer

Donett Adams  
Dip. Secretarial Science (GTI)

Grading Officer

Leelawatie Manohar  
Dip. Agriculture (GSA)

Grading Officer

Uancy Chichester  
Dip. Agriculture (GSA)**Region 4**

Regional Co-ordinator

Charles Hope  
B. Sc. Economics (UG)  
Dip. Marketing (UG)

Research Assistant

Marsha Hohenkirk  
B. Sc Agriculture (UG)

Grading Officer

Shemeka Reece  
Dip. Agriculture (GSA)

Grading Officer

Trevonne Wright  
Cert. Agriculture (GSA)

Grading Officer

Paul A. Harry  
Cert. Agriculture (GSA)Kumar Ranga  
Diploma in Agriculture (GSA)

Michelle Blair

Technical Assistant

Ezekiel Jacobs  
Jamal Harris  
Seon Johnson**Region 5**

Regional Co-ordinator

Errol Joseph  
Cert. Agriculture (GSA)

Grading Officer

Eon Bacchus

Dip. Agriculture (GSA)

Grading Officer

Beverley Joseph

Technical Assistant

Yonette Hawker

**Region 6**

Regional Supervisor

VisanBudraj  
B. Sc. Agriculture (UG)  
Dip. Agriculture (GSA)

Grading Officer

Lubert Walcott  
Cert. Agriculture (GSA)

Grading Officer

Arleen Munroe  
Cert. Agriculture (GSA)

Grading Officer

Steve Lyte

Technical Assistant

Roderick Somrah

**Extension Division**

Extension Manager

Kuldip Ragnauth  
Certified Master Trainer (CMT,  
UWI)  
B. Sc. Agriculture (UG)  
Dip. Agriculture (GSA)



**Region 2**

District Rice Extension Officer

Davendra S. Singh  
Dip. Agriculture (GSA)

District Rice Extension Officer

TameshRamnauth  
Cert. Agriculture (GSA)

District Rice Extension Officer

Subodh Kishore  
Cert. Agriculture (GSA)**Region 3**

Regional Rice Extension Officer

DeodramGarbarran  
Dip. Agriculture (GSA)**Region 4 & 5**

Research Superintendent

SatyanandNarain  
B. Sc. Agriculture (UG)Dip. Agriculture (GSA)  
Regional Rice Extension OfficerSatishSookram  
Dip. Agriculture (GSA)

District Rice Extension Officer

Quacie Wilson  
Dip. Agriculture (GSA)

District Rice Extension Officer

RishalRamsaran  
Dip. Agriculture (GSA)

District Rice Extension Officer

Delon McKenzie  
Cert. Agriculture (GSA)**Region 6**

District Rice Extension Officer

Phillip Jainarine  
Cert. Agriculture (GSA)

Field Officer

P. Ramcharitar

Field Officer

Jairam Harridat

**Region 9**

Hinterland Co-ordinator

Persaram Ramdat  
B. Sc. Entomology (India)

Extension Officer

Dindial Jadgeo

Mechanic

Olivia Simon  
Cert. Agri. Mechanic (GTI)

**Rice Research Station, Burma**

Resident Manager

Jai Prakash Narine  
B. Technology-Industrial  
Engineering (RPI)

Chief Clerk

MarcelleMc Rae  
Dip. Accounts (UG)

**Plant Breeding**

Plant Breeder/Chief Scientist (ag.)

Dr. Mahendra Persaud  
PhD & M. Sc. (Ag)  
Plant Breeding & Genetics (India)  
B. Sc. Agriculture (UG)  
Dip. Agriculture (GSA)

Research Assistant

Colin Watson  
B. Sc. Agri. Engineering (Cuba)  
Dip. Computer Science (UG)

Research Assistant

Shanna Crawford  
B. Sc. Agriculture (UG)  
Dip. Agriculture (GSA)

Research Assistant

Tyrone English  
B. Sc. Agriculture (UG)  
Dip. Agriculture (GSA)

Research Technician

Elijah B. Adams  
Cert. Agriculture (GSA)

Research Technician

Jairam Persaud  
Cert. Agriculture (GSA)

**Pathology**

Pathologist/H.O.D.

Rajendra Persaud  
M. Sc. Plant Pathology (India)  
B. Sc. Agriculture (UG)  
Dip. Agriculture (GSA)

Research Assistant

Bissessar Persaud  
B. Sc. Agriculture (Cuba)  
Dip. Agriculture (GSA)

**Entomology**

Entomologist

Viviane Baharally  
M. Sc. Entomology (India)  
B. Sc. Agri. (UG)





Research Assistant	Narita Singh B. Sc. Biology (UG)
Research Technician	Luarel Alfred Cert. Agriculture (GSA)
Research Technician	Alwyn Pierre Cert. Agriculture
<b>Agronomy</b> Agronomist/H.O.D.	Ghansham Payman M. Sc. Agronomy (India) B. Sc. Agri. (UG)
Research Assistant	Gordon Gouveia B. Sc. Agri. (UG) Dip. Agri. (GSA)
Research Assistant	Miranda Henry B. Sc. Agri. (UG) Dip. Agri. (GSA)
Research Technician	Jomine Sharpe Dip. Agriculture (GSA)
<b>Farm Operation</b> Seed Production Co-ordinator (ag.)	Jaddonauth Persaud Dip. Agriculture (GSA)
Supervisor	Niron Singh
Farm Manager	Bindrabhan Bisnauth Proficiency Cert. Of Examination, College of Preceptors Cert. General Certificate of Examination
<b>Study Leave</b> Dhirendranath Singh	First Year Student (University of Yamagata, Japan)
Violet Henry	Third Year Student (UG)
Shemeka Reece	First Year Student (UG)
Jasmine Thompson	First Year Student (GSA)



**Appendices**

1. Licensed Rice Mills 2010
2. Rice statistics (1969-2010)
3. Comparison of yearly Product (2001-2010)
4. Export According to Products 2010
5. Export as per Destination 2010
6. Average Export Prices 2003-2010
7. Spring Crop Harvesting 2010
8. Autumn Crop Harvesting 2010
9. Harvesting Production 2010
10. Paddy Price 2000-2010





## Appendix 1 - Licensed Mills - 2010

## Region 2

NAME OF MILLER	ADDRESS	MILL NO.
Imam Bacchus and Sons	Affiance, Essequibo Coast	120
La Resource Rice Industry	La Resource, Essequibo Coast	257
Indar Singh	Airy Hall, Essequibo Coast	Provisional
Golden Fleece Rice Inv	Golden Fleece, Essequibo Coast	114
Caricom Rice Mills Ltd	Anna Regina, Essequibo Coast	203
Mohamed Ramzanalli Khan	Fairfield, Essequibo Coast	251
Corentyne Rice Inc (Mahaicony Rice Ltd)	Vilvoorden, Essequibo Coast	11/006/2763
Corentyne Rice Inc (Mahaicony Rice Ltd)	Paradise, Essequibo Coast	Buying Centre
Francis Garaban & Son	47 Walton Hall, Essequibo	248
Old Mac (Guyana) Ltd	Hampton Court, Essequibo Coast	110
Ramlakhan and Sons	Ex-Mouth, Essequibo Coast	240
Vincent Persaud	Bounty Hall, Essequibo	Provisional
Naraindra Biragie	Paradise, Essequibo	249
Wazir Hussain	Dry Shore, Essequibo	Provisional
Land of Plenty Inv.	Land of Plenty, Essequibo Coast	122
Deonarine	Evergreen, Essequibo Coast	243

## Region 3

NAME OF MILLER	ADDRESS	MILL NO.
Goed Fortuin Rice Mill (Jeetlall Ramraj)	Goed Fortuin, W.C.D.	Provisional
Two Brothers Corp.	Vergenoegen, East Bank Demerara	Provisional
Fiuze Khan	Leguan, Essequibo Island	Provisional
Lachmie Persaud Doobay	Doorn, Haag Leguan	191



Hansraj & Mohan Persaud	Greenwich Park, E.B.E.	Provisional
Rahman Badshaw	Maryville, Leguan	Provisional
Vergenoegen Co-op Society	Vergenoegen, East Bank Essequibo	169
Abdool Hakh & Sons	Harlem, West Coast Demerara	100
Ruimzeight Rice Processors Inc.	Ruimzeight, West Coast Demerara	223
Friendship Rice Mill (Lillashwar Seeram)	Friendship, Wakenaam	Provisional
Ramjohn Katun & Sons	Goed Success, Wakenaam	188
Chand' Rice Milling Enterprise (I.D. Chand)	La Bagatelle, Leguan, Essequibo	172
Bhagwandeem Tularam & Sons	Lot 1 Belfield, Leguan, Essequibo	253
Mohamed Shafi	Zeelandia, Wakenaam	187
Ramnarine Gokul	Windsor Forest, W.C.D.	148
Ramrattie & Yovindra Ojha	Blenheim, Leguan, Essequibo Island	192A
Treshan Ojha	1 & 2 Blenheim, Leguan	192
Madho Bros	Rumzeight, West Coast Demerara	144

### Regions 4 & 5

NAME OF MILLER	ADDRESS	MILL NO.
Guyana Stockfeeds Inc	Farm, East Bank Demerara	256
Kissoon Dyal & Son	Chelsea Park ,Mahaica, E.C.D	213
Blairmont Rice Investment (Mahaicony Rice Ltd)	Blairmont, West Coast Berbice	40
Demerara Millers & Traders (Mahaicony Rice Ltd)	Perth, Mahaicony, E.C.D	63
Mahaicony Rice Ltd	Cane Grove, E.C.D	Buying Centre
A.C Hakh and Sons Cane Grove Mahaica E.C.D	Cane Grove Mahaica, E.C.D	58
Fairfield Rice Inv	Fairfield, Mahaicony, E.C.D	74
Rayaadul Hakh Rice Industry	Strangroen, Mahaicony, E.C.D	39
Saj Rice Group Inc	Burma, Mahaicony, E.C.D	68
Deonarine Sukhlall	De Hoop, Mahaica, E.C.D	244





Sham Persaud	Felicity, Mahaicony, E.C.D	72
Endeavour Rice Mill	De Hoop, Mahaica, E.C.D.	78
Angad Rupee	Trevlugt, W.B.D.	Provisional
Guya P. Ramotar	De Kendren, Mahaicony, E.C.D.	75
Balram & Kheman Ractoo	De Kendren, Mahaicony, E.C.D.	92
Planters Hall Rice Mill (Boodram & Dhanlall Sooklall)	Plantation Hall, Mahaicony, E.C.D.	Provisional
Technomill Guyana Inc.	76 Block DD, Eccles Industrial Estate, E.B.D.	10/009/01
Strangroen Enterprise Ltd.	De Hoop, Mahaica, E.C.D.	78A

## Region 6

NAME OF MILLER	ADDRESS	MILL NO.
Nand Persaud and Company Ltd	No. 36 Village, Corentyne, Berbice	240
Ramkoomar Ramdeo	Bush Lot Village, Berbice	17
Outram Ramprashad & Sons Rice Milling Est	Johanna, Black Bush Polder, Berbice	220
Krishndat Persaud	No. 57 Village, Corentyne, Berbice	15
Tota Budhram	No. 64 Village, Corentyne, Berbice	12
Mohamed Sultan Hakim	Letter Kenny Village, Corentyne, Berbice	23
Purshutam Dhanaswar	No. 59 Village, Corentyne, Berbice	14 B
Mahendra Singh	No. 68 Village, Corentyne, Berbice	10 B
Canje Rice Inc (Mahaicony Rice Ltd)	Johanna, Black Bush Polder, Berbice	Provisional



Canje Rice Inc (Mahaicony Rice Ltd)	No. 70 Village, Corentyne, Berbice	Buying Centre
Thakurdial Tulshi	No. 49 Village, Corentyne, Berbice	16 C
Jaiswah Boadnarine	No. 62 Village, Corentyne, Berbice	12 A
Bhogwattie Bhola	No. 47 Village, Corentyne, Berbice	15 C
Harnarine Lakhram	No. 69 Village, Corentyne, Berbice	10 A
Ahamed Ali	Whim Village, Corentyne, Berbice	21
Navin Brijbassi	No. 62 Village, Corentyne, Berbice	218
Lalla Persaud Juggerdeo	No. 0 Village, Corentyne, Berbice	15 A
T & R Karran	Don Robin Village, Corentyne, Berbice	33 A
Omnarine Persaud	No. 68 Village, Corentyne, Berbice	4
Afzal Haniff	No. 63 Village, Corentyne, Berbice	62
Chiranjulall Rice Mill	No. 71 Village, Corentyne, Berbice	9A





## APPENDIX 2 - RICE STATISTICS 1969 - 2010

Year	Hectare	Paddy	Yield per Hectare	140 lbs	Rice Equiv	Quantity	Value
	Harvested	Production	Tonnes	(HA)	Tonnes	Exported (MT)	G\$ & US\$
1969	113,081	173,392	1.5	24.2	112,644	62,243	\$19,147.00
1970	119,182	222,469	1.8	29.3	144,605	59,347	\$18,047.00
1971	94,551	187,535	1.9	31.1	121,989	67,515	\$21,334.00
1972	79,462	147,130	1.8	29.1	95,639	69,949	\$25,251.00
1973	92,821	152,360	1.6	25.9	99,034	47,814	\$25,005.00
1974	105,741	255,886	2.4	38.0	165,657	50,827	\$49,025.00
1975	108,486	297,099	2.7	43.2	172,259	82,035	\$84,937.00
1976	84,027	172,904	2.0	32.3	103,754	70,681	\$73,594.00
1977	130,528	358,290	2.7	43.2	214,972	65,855	\$66,812.00
1978	114,846	308,207	2.6	42.2	184,985	104,761	\$95,983.00
1979	90,227	240,556	2.6	41.9	144,328	84,080	\$80,814.00
1980	95,991	281,846	2.9	46.1	169,107	81,008	\$87,491.00
1981	89,053	276,006	3.0	48.9	165,604	78,010	\$110,009.00
1982	95,280	302,671	3.1	49.8	181,603	35,676	\$60,767.00
1983	75,807	246,064	3.2	51.1	147,639	41,715	\$64,933.00
1984	92,987	299,628	3.2	50.6	179,785	47,498	\$80,945.00
1985	77,777	260,207	3.3	52.6	156,124	29,339	\$56,594.00
1986	83,977	293,073	3.4	54.8	171,044	38,634	\$57,234.00
1987	75,146	243,398	3.2	50.8	145,879	68,987	\$157,128.00
1988	74,223	226,862	3.0	48.1	132,281	55,926	\$139,165.00
1989	68,544	237,183	3.4	54.5	142,310	40,575	\$367,427.00
1990	51,368	155,740	3.0	47.6	93,444	50,943	\$513,220.00
1991	76,209	251,321	3.3	51.8	150,783	54,047	US\$17,202,635.00
1992	77,327	286,000	3.7	58.2	171,000	115,102	US\$35,000,135.00
1993	98,061	336,207	3.4	61.5	201,702	124,089	US\$33,045,227.00
1994	97,660	378,432	3.8	61.0	233,111	182,585	US\$55,547,061.00
1995	132,344	525,500	3.9	62.4	315,301	200,336	US\$76,397,522.00
1996	135,436	543,437	4.0	63.2	332,542	262,265	US\$93,716,748.21
1997	142,782	568,186	3.9	62.7	340,911	285,051	US\$84,224,971.47
1998	129,469	522,907	4.0	63.4	339,890	249,755	US\$73,259,786.73
1999	147,071	562,260	3.8	59.7	365,469	251,519	US\$71,035,677.51
2000	115,872	448,740	3.8	61.0	291,967	207,638	US\$51,790,072.00
2001	124,565	495,862	3.9	62.7	322,310	209,042	US\$50,061,834.00
2002	107,902	443,654	4.1	64.7	288,375	193,416	US\$45,463,590.45
2003	127,662	546,183	4.3	67.4	355,019	200,432	US\$45,273,049.61
2004	115,742	500,911	4.3	68.1	325,592	243,093	US\$55,066,513.74
2005	106,645	420,365	3.9	62.1	273,237	182,175	US\$46,172,149.45
2006	102,934	472,363	4.6	72.2	307,036	204,577	US\$ 54,622,559.62
2007	105,865	458,653	4.3	68.2	298,125	269,436	US \$ 75,251,464.99
2008	119,792	507,036	4.2	66.6	329,574	196,233	US \$ 118,032,802.90
2009	124,820.00	553,522.00	4.4	69.8	359,789.00	260,815.24	US \$ 114,120,323.83
2010	131,417.20	556,195.00	4.2	66.6	361,527.00	336,313	US\$ 154,622,744.10



## APPENDIX 3 - Comparison of Monthly Exports (2001-2010)

MONTH	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
JANUARY	18,188	17,237	8,709	22,641	10,426	7,361	24,026	11,578	9,635	36,137
FEBRUARY	6,683	13,271	8,416	13,295	15,582	10,427	11,518	5,694	21,200	18,790
MARCH	9,798	13,401	11,444	16,911	11,487	9,254	32,189	5,274	14,333	15,204
APRIL	24,135	20,738	13,382	20,931	16,189	17,127	22,644	21,421	13,732	20,651
MAY	16,655	13,160	13,032	32,666	17,911	20,751	28,674	25,008	34,632	35,328
JUNE	25,091	18,172	25,426	28,314	18,261	14,746	26,868	21,361	30,746	31,125
JULY	21,698	15,593	20,674	20,229	13,086	20,706	16,204	19,334	22,757	35,299
AUGUST	11,012	15,378	20,277	13,102	10,149	16,708	18,573	9,091	20,742	19,691
SEPTEMBER	10,585	11,775	9,716	20,656	13,052	21,851	15,861	20,264	15,955	17,925
OCTOBER	26,905	24,541	26,160	17,973	22,566	18,509	25,386	20,551	24,476	33,127
NOVEMBER	19,489	18,736	21,748	21,752	20,629	26,265	25,168	24,527	30,955	40,796
DECEMBER	18,803	11,413	21,448	14,622	12,837	20,872	22,325	12,130	21,653	32,240
<b>TOTAL</b>	<b>209,042</b>	<b>193,415</b>	<b>200,432</b>	<b>243,092</b>	<b>182,175</b>	<b>204,577</b>	<b>269,436</b>	<b>196,233</b>	<b>260,815</b>	<b>336,313</b>

## APPENDIX 4 - Export According to Products 2010

PRODUCT	QUANTITY (MT)	% OF TOTAL EXPORTS
BRAN	3,218	0.9
C.P.B BKN	71	0.0
C.P.B PKG	24	0.0
C.P.B RICE	5,168	1.5
CARGO BKN	13,445	4.0
CARGO RICE	114,167	34.0
DAMAGE RICE	579	0.2
P.B PKG BK	5	0.0
P.B PKG RICE	8,410	2.5
PADDY	63,559	19.0
PKG PET RICE	73	0.0
PARB BKN	3,316	1.0
PARB RICE	22,275	6.6
PET RICE	927	0.3
REJ. P.B. RICE	988	0.3
WHT BKN	31,733	9.4
PKG WHT BKN	28	0.0
DIS POL RICE	90	0.0
WHT PKG RICE	759	0.2
WHT RICE	67,478	20.1
<b>TOTAL</b>	<b>336,313</b>	<b>100%</b>





## APPENDIX 5 - Export as per Destination 2010

DESTINATION	QUANTITY (MT)	TOTAL EXPORT PERCENTAGE
<b>CARICOM:</b>		
ANTIGUA	862	
BARBADOS	3,621	
DOMINICA	1,185	
GRENADA	1,595	
JAMAICA	48,754	
ST. KITTS	182	
ST. LUCIA	887	
ST. VINCENT	1,620	
SURINAME	138	
TRINIDAD	29,865	
<b>SUB TOTAL</b>	<b>88,709</b>	<b>26.37%</b>
<b>EUROPEAN UNION:</b>		
BELGIUM	23,434	
FRENCH GUIANA	66	
GERMANY	825	
GUADELOUPE	3,434	
SWEDEN	100	
HOLLAND	41,161	
MARTINIQUE	1,715	
POLAND	6,893	
PORTUGAL	65,851	
UNITED KINGDOM	10,357	
<b>SUB TOTAL</b>	<b>153,836</b>	<b>45.74%</b>
<b>OCT:</b>		
ARUBA	1,300	
CURACAO	23	
T&CAICOS ISLAND	8	
<b>SUB TOTAL</b>	<b>1,331</b>	<b>0.40%</b>
<b>OTHERS:</b>		
COSTA RICA	100	
U.S.A.	10	
VENEZUELA	85,755	
GUATEMALA	75	
HAITI	5,766	
PANAMA	731	
<b>SUB TOTAL</b>	<b>92,437</b>	<b>27.49%</b>
<b>TOTAL</b>	<b>336,313</b>	<b>100%</b>



## APPENDIX 6 - Average Export Prices 2003-2010

REGION	2003	2004	2005	2006	2007	2008	2009	2010
<b>EUROPEAN UNION</b>								
CARGO PB BKN	-	100	110	110	110	-	-	-
PARB. BKN	100	100	110	110	110	295	207	207
REJ. PB RICE	-	-	-	-	158	-	-	-
CARGO RICE	206	218	240	260	262	600	409	434
CARGO BKN	100	118	-	142	148	265	250	265
WHITE RICE	-	-	-	-	320	530	447	486
WHITE BKN	143	143	160	160	168	425	241	246
C.P.B RICE	240	240	244	306	261	480	440	446
PARB. RICE	-	-	-	-	400	-	550	650
<b>CARICOM</b>								
CARGO RICE	-	217	364	260	283	623	443	407
CARGO BKN	100	-	105	110	-	295	210	267
WHITE RICE	260	275	275	295	347	688	532	513
WHITE PKG. RICE	-	-	352	390	594	763	512	611
WHITE BKN	140	140	180	175	178	426	316	369
C.P.B RICE	240	240	290	310	285	945	608	655
C.P.B. BKN	100	100	104	120	110	190	295	267
PARB RICE	370	390	399	400	425	824	716	624
PARB PKG. RICE	-	-	468	475	638	851	756	689
PARB BKN	100	130	162	165	164	354	253	267
REJ . PB RICE	110	153	170	178	195	-	294	326
BRAN	45	40	62	63	45	118	96	120
PET RICE	-	-	-	-	190	-	250	339
<b>OCT</b>								
CARGO RICE	206	218	242	260	260	557	375	-
CARGO BKN	100	118	121	110	145	355	187	185
WHITE RICE	-	245	245	300	-	-	-	524
WHITE BKN	140	143	150	160	161	-	-	-
C.P.B RICE	-	-	-	-	-	-	185	-
C.P.B BKN	-	100	104	-	-	-	-	-
<b>OTHERS</b>								
CARGO BKN	-	127	-	110	-	-	-	-
WHITE RICE	260	245	273	295	308	703	510	700





WHITE BKN	155	150	174	160	166	435	276	246
PARB. RICE	-	-	-	-	373	-	590	590
PADDY	-	131	-	-	-	-	348	420
PET RICE	-	40	-	-	194	600	-	-
CHIPS	-	-	-	-	190	-	-	-
CARGO RICE	-	226	233	265	280	510	400	-
PARB PKG RICE	-	-	-	-	462	-	681	670
PARB RICE FLOUR	-	-	-	-	353	-	-	-
DIS. WHT RICE	-	-	-	-	230	-	-	-
WHT RICE FLOUR	-	-	-	-	353	-	-	-
C.P.B. RICE	-	220	-	-	-	480	-	-
WHT PGK RICE	-	-	-	-	-	-	502	-
STOCKFEED	-	-	-	-	-	-	320	-
BRAN	-	-	-	-	-	-	100	65



## APPENDIX 7 - Spring Crop Harvesting 2010

REGION / ZONE	HECTARE						Paddy Production		Rice Equiv. M/T	Yield (Bags/Ha)	Yield (Tons/Ha)	%
	Target	Prepared	Sown	Harvested	Bags	M/T	(Bags/Ha)	(Tons/Ha)				
<b>REGION 2</b>												
Essequibo	12,955	11,441.30	11,441.30	10,368.00	841,544	53,456	34,746	81.2	5.2	90.6		
Sub-Total	12,955	11,441.30	11,441.30	10,368.00	841,544	53,456	34,746	81.2	5.2	90.6		
<b>REGION 3</b>												
Wakenaam	1,012	291.5	275.3	218.6	13,500	858	557	61.8	3.9	79.4		
Leguan	1,214	104.04	104.04	44.9	1,443	92	60	32.1	2	43.2		
Hogg Island	101	44.53	44.53	44.5	2,530	161	104	56.9	3.6	99.9		
West Demerara	5,668	5,303.60	5,024.30	3,931.10	265,630	16,873	10,967	67.6	4.3	78.2		
Sub-Total	7,995	5,743.67	5,448.17	4,239.10	283,103	17,983	11,689	66.8	4.2	77.8		
<b>REGION 4</b>												
Baiboo/Cane Grove	2,225	2,004.00	1,772.90	1,772.90	141,444	8,985	5,840	79.8	5.1	100		
Golden Grove/Mahaica	951	894.7	856.3	850.2	34,440	2,188	1,422	40.5	2.6	99.3		
Sub-Total	3,176	2,898.70	2,629.20	2,623.10	175,884	11,172	7,262	67.1	4.3	99.8		
<b>REGION 5</b>												
Mahaica/Mahaicony	8,097	3,336.00	3,303.60	2,625.50	153,694	9,763	6,346	58.5	3.7	79.5		
Mahaicony/Abary	8,097	7,995.90	7,821.90	7,457.50	462,342	29,368	19,089	62	3.9	95.3		
West Berbice	16,194	14,332.00	13,562.80	13,472.90	835,278	53,058	34,487	62	3.9	99.3		
Sub Total	32,388	25,663.90	24,688.30	23,555.90	1,451,314	92,189	59,923	61.6	3.9	95.4		
<b>REGION 6</b>												
Frontlands	12,950	12,388.70	12,388.70	12,298.00	820,152	52,097	33,863	66.7	4.2	99.3		
Black Bush Polder	7,325	7,206.50	7,206.50	7,206.50	516,200	32,789	21,313	71.6	4.5	100		
Sub-Total	20,275	19,595.20	19,595.20	19,504.50	1,336,352	84,886	55,176	68.5	4.4	99.5		
<b>TOTAL</b>	<b>76,789</b>	<b>65,342.77</b>	<b>63,802.17</b>	<b>60,290.60</b>	<b>4,088,197</b>	<b>259,686</b>	<b>168,796</b>	<b>67.8</b>	<b>4.3</b>	<b>94.5</b>		



## APPENDIX 8- Autumn Crop Harvesting 2010

REGION / ZONE	HECTARE		Paddy Production				Rice Equiv M/T	Yield (Bags/Ha)	Yield (Tons/Ha)	% Harvested
	Target	Prepared	Sown	Harvested	Bags	M/T				
<b>REGION 2</b>										
Essequibo	14,170	13,917.90	13,839.10	13,786.90	876,452	55,673	36,187	63.6	4	99.6
Sub-Total	14,170	13,917.90	13,839.10	13,786.90	876,452	55,673	36,187	63.6	4	99.6
<b>REGION 3</b>										
Wakenaam	1,012	850.2	821.5	796.4	51,221	3,254	2,115	64.3	4.1	96.9
Legan	1,214	1,716.60	1,716.60	1,705.30	129,982	8,257	5,367	76.2	4.8	99.3
Hogg Island	101	0	0	0	0	0	0	#DIV/0!	#DIV/0!	#DIV/0!
West Demerara	5,668	5,603.20	5,603.20	5,483.60	458,668	29,135	18,938	83.6	5.3	97.9
Sub-Total	7,995	8,170.00	8,141.30	7,985.30	639,871	40,645	26,419	80.1	5.1	98.1
<b>REGION 4</b>										
Baiboo/Cane Grove	2,225	2,226.70	2,216.60	2,216.60	171,368	10,885	7,076	77.3	4.9	100
Golden Grove/ Mahaica	951	931.2	927.1	927.1	70,990	4,509	2,931	76.6	4.9	100
Sub-Total	3,176	3,157.90	3,143.70	3,143.70	242,357	15,395	10,007	77.1	4.9	100
<b>REGION 5</b>										
Mahaica/Mahaicony	8,097	8,046.60	8,018.20	8,008.00	509,779	32,382	21,048	63.7	4	99.9
Mahaicony/Abary	8,097	6,680.20	6,281.40	6,147.80	371,828	23,619	15,352	60.5	3.8	97.9
West Berbice	16,194	15,283.40	13,259.10	13,099.00	807,805	51,312	33,353	61.7	3.9	98.8
Sub Total	32,388	30,010.20	27,558.70	27,254.80	1,689,412	107,313	69,753	62	3.9	98.9
<b>REGION 6</b>										
Frontlands	12,950	11,906.90	11,904.90	11,794.30	774,930	49,224	31,996	65.7	4.2	99.1
Black Bush Polder	7,325	7,287.40	7,125.50	7,122.00	443,349	28,162	18,305	62.3	4	100
Sub-Total	20,275	19,194.30	19,030.40	18,916.30	1,218,279	77,386	50,301	64.4	4.1	99.4
<b>REGION 9</b>										
Lethem	49	34	34	34	1,494	95	62	43.9	2.8	100
Sub Total	49	34	34	34	1,494	95	62	43.9	2.8	100
<b>Total</b>	<b>78,053</b>	<b>74,484.30</b>	<b>71,747.20</b>	<b>71,121.00</b>	<b>4,667,865</b>	<b>296,507</b>	<b>192,729</b>	<b>65.6</b>	<b>4.2</b>	<b>99.1</b>



## APPENDIX 9 - Harvesting Production 2010

REGION / ZONE	HECTARE		Prepared	Sown	Harvested	Paddy Production		Rice Equiv.		Yield (Tons/Ha)	Yield (Bags/Ha)	%
	Target					Bags	M/T	M/T	Harvested			
<b>REGION 2</b>												
Essequibo	25,910	25,360.00	25,360.00	25,281.00	24,155.00	1,717,996	109,129	70,934	71.1	4.5	95.5	
Sub-Total	25,910	25,360.00	25,360.00	25,281.00	24,155.00	1,717,996	109,129	70,934	71.1	4.5	95.5	
<b>REGION 3</b>												
Wakenaam	2,024	1,142.00	1,142.00	1,097.00	1,015.00	64,721	4,111	2,672	63.8	4.1	92.5	
Leguan	2,428	1,821.00	1,821.00	1,821.00	1,751.00	131,425	8,348	5,426	75.1	4.8	96.2	
Hogg Island	202	45.00	45.00	45.00	45.00	2,530	161	104	56.2	3.6	100.0	
West Demerara	11,336	10,907.00	10,907.00	10,628.00	9,415.00	724,298	46,008	29,905	76.9	4.9	88.6	
Sub-Total	15,990	13,915.00	13,915.00	13,591.00	12,226.00	922,974	58,628	38,108	75.5	4.8	90.0	
<b>REGION 4</b>												
Baiboo/Cane Grove	4,450	4,231.00	4,231.00	3,990.00	3,990.00	312,812	19,870	12,916	78.4	5.0	100.0	
Golden Grove/Mahaica	1,902	1,826.00	1,826.00	1,783.00	1,779.10	105,461	6,699	4,354	59.3	3.8	99.8	
Sub-Total	6,352	6,057.00	6,057.00	5,773.00	5,769.10	418,273	26,569	17,270	72.5	4.6	99.9	
<b>REGION 5</b>												
Mahaica/Mahaicony	16,194	11,383.00	11,383.00	11,322.00	10,634.00	663,473	42,144	27,394	62.4	4.0	93.9	
Mahaicony/Abary	16,194	14,677.00	14,677.00	14,104.00	13,605.80	834,170	52,987	34,442	61.3	3.9	96.5	
West Berbice	32,388	29,616.00	29,616.00	26,822.00	26,572.00	1,643,083	104,370	67,841	61.8	3.9	99.1	
Sub Total	64,776	55,676.00	55,676.00	52,248.00	50,811.80	3,140,726	199,502	129,676	61.8	3.9	97.3	
<b>REGION 6</b>												
Frontlands	25,900	24,296.00	24,296.00	24,294.00	24,092.30	1,595,082	101,321	65,859	66.2	4.2	99.2	
Black Bush Polder	14,650	14,494.00	14,494.00	14,332.00	14,329.00	959,549	60,951	39,618	67.0	4.3	100.0	
Sub-Total	40,550	38,790.00	38,790.00	38,626.00	38,421.30	2,554,631	162,272	105,477	66.5	4.2	99.5	
<b>REGION 9</b>												
Lethem	49.00	34.00	34.00	34.00	34.00	1,494	95	62	43.9	2.8	100.0	
Sub Total	49.00	34.00	34.00	34.00	34.00	1,494	95	62	43.9	2.8	100.0	
<b>Total</b>	<b>153,627</b>	<b>139,832.00</b>	<b>139,832.00</b>	<b>135,553.00</b>	<b>131,417.20</b>	<b>8,756,093</b>	<b>556,195</b>	<b>361,527</b>	<b>66.6</b>	<b>4.2</b>	<b>96.9</b>	



## APPENDIX 10 - Paddy Price 2000-2010

Year	First Crop		Second Crop		B	C	Substandard	Extra A	A	B	C	Substandard
	Extra A		A									
2000	1,300		1,250	1,200	1,200	1,150	900/1000	1,300	1,250	1,200	1,150	900/1000
2001	1,300		1,200	1,100	1,100	1,000	600/900	1,300	1,200	1,100	1,000	900
2002	1,400		1,300	1,300	1,300	1,200	1,000	1,400	1,300	1,300	1,300	1,000
2003	1,350		1,300	1,200	1,200	1,100	900	1,400	1,350	1,350	1,350	600/1000
2004	1,400		1,350	1,350	1,350	1,350	600/1000	1,500	1,500	1,500	1,500	600/1000
2005	-		1,500	1,500	1,500	1,500	1,000	-	1,700	1,700	1,700	1,000
2006	2,000		1,800	1,750	1,750	1,600	1,000/1,400	1,800	1,700	1,600	1,500	1,000/1,400
2007	1,900		1,800	1,750	1,750	1,700	1,000/1,500	2,300	2,100	2,100	2,100	1,500/1,700
2008	5,500		5,000	4,000	4,000	4,000	3,000/4,000	4,500	4,000	4,000	4,000	3,000/4,000
2009	3,000-5,000		3,000-5,000	3,000-5,000	3,000-5,000	3,000-5,000	2,000	2,200-2,500	2,200-2,500	2,200-2,500	2,200-2,500	1,200
2010	3,100-3,500		3,000-3,500	3,200-3,600	3,200-3,600	3,100-3,600	2,700-3,500	2,500-3,500	2,400-3,500	2,300-3,500	2,200-3,300	2,000-2,900



**Guyana Rice Development Board  
All Offices in the Regions**

Anna Regina Sub-Office  
Essequibo Coast  
Regional Superintendent  
Tele:  
Fax:

Devwattie Dass  
592-771-4158  
592-771-4158

Crane Sub-Office  
West Coast Demerara  
Regional Superintendent  
Tele:

Colin Watson  
592-254-0355

Burma Rice Research Station  
Burma, Mahaicony, East Coast Demerara  
Regional Co-ordinator  
Tele:  
Fax:

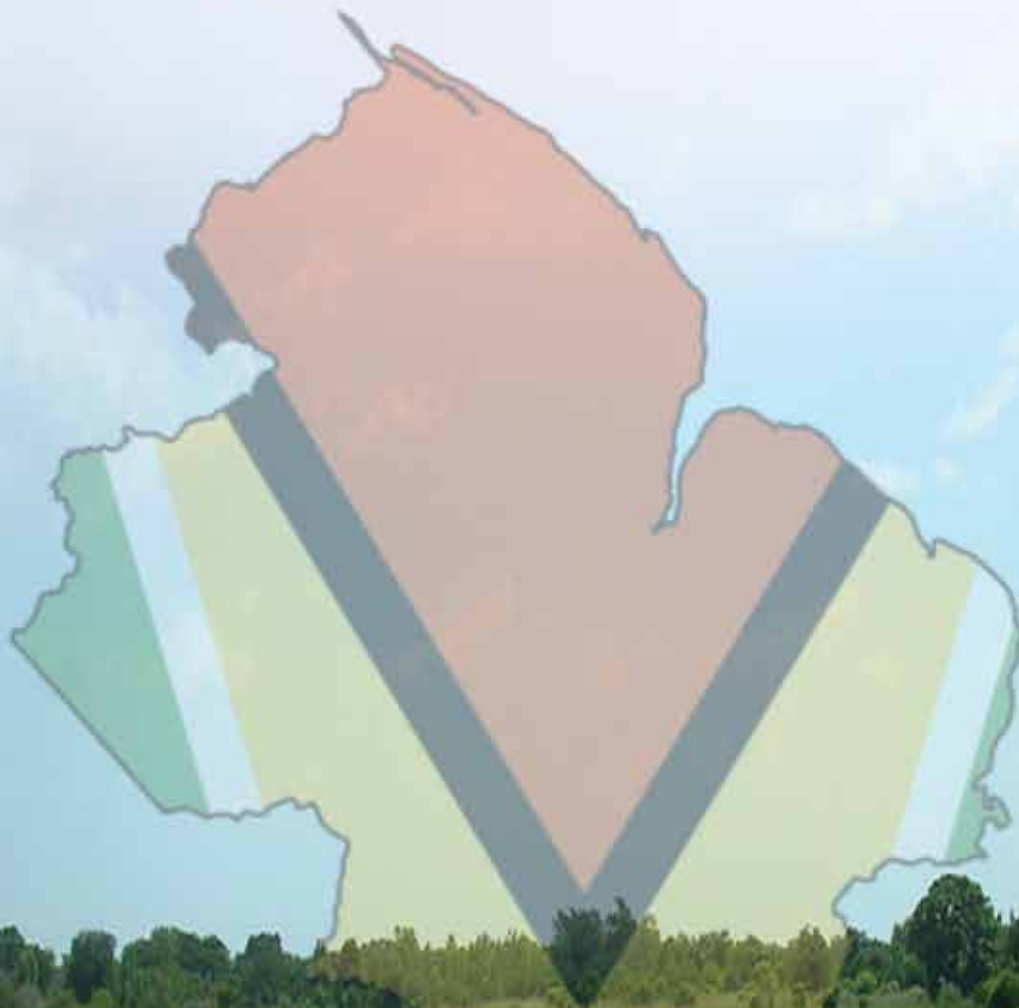
Errol Joseph  
592-221-2646  
592-232-1304

Corriverton Sub Office & Black Bush Polder  
Regional Supervisor  
Tele:  
Fax:

Visan Budraj  
592-335-3318  
592-335-3318







## Guyana Rice Development Board

For further information contact:  
Tel.: (592) 225-8717, 226-8223,  
221-2646 or 232-1303  
Fax: (592) 225-6486 or 232-1304  
Email: [grdb@gol.net.gy](mailto:grdb@gol.net.gy)

Designed & Printed by:

**PRINT BROKER**

When Quality Matters

Tel: (592) 612-2324

Fax: (592) 226-2118