

Guyana Rice Development Board

Annual Report 2009


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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 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. Administration
2. Finance
3. Marketing
4. Quality Control
5. Research
6. Extension
7. Internal Audit

Finance

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

Administration

This Department, which is staffed by a Manager, a Confidential Secretary, a Clerk, and an Office Assistant, 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.



Marketing

Headed by a Manager and staffed by a Marketing Assistant, 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 among rice millers and exporters meets 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 and local standards.

Research

This component of the Guyana Rice Development Board's several areas of 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 research unit. 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.

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



Chairman's Statement

Guyana's rice industry has delivered a resilient performance for 2009. Rice exported valued US\$114m which represents the second highest earnings ever in the sector. This achievement is remarkable given the downward trend in prices relative to 2008 and other major challenges associated with trading of commodities.

The acute phase of the global financial crisis was still being felt. There was significant decline in economic activities, weak consumer confidence, tightening and restriction to the availability of credit, fallen prices and general decline in international trade. On the domestic front the rice industry was faced with the extremes of the weather; in the earlier part of the year above normal rainfall resulted in flood severely affecting the spring crop while in the second crop the drought situation impeded cultivation in irrigation challenges. In the face of these difficulties the GRDB in collaboration with the National Drainage and Irrigation Authority, the Guyana Rice Producers Association and most importantly the farmers under the overall supervision of the Ministry of Agriculture responded to the challenges and the industry achieved productivity and quality which are recorded among the best.

In 2009 GRDB released two new varieties of rice for commercial cultivation in Guyana. These two varieties *viz.* GRDB 09 and GRDB FG 10 have demonstrated their superior performance with a yield advantage of 15 % and 30 % respectively over existing varieties in farmer's field. Farmers have achieved yield 7-8 t/ha (45-50 bags per acre) from GRDB FL 10 while the GRDB 09 produce yields of 6-7 t/ha (40-45 bags/acre). These new strains possess excellent milling and cooking quality with resistance to disease.

To propel the rice industry forward GRDB is continuing its efforts in developing high-yielding varieties with tolerance to lodging; stable resistance to blast; high milling yield; excellent cooking qualities., and also working with farmers to build capacity on new technologies. Attempts are also being made to evolve aromatic and salt tolerant varieties.

In an effort in becoming more efficient and modern, GRDB through a restructuring process will be establishing a Post Harvest Technology Department. This department will cater to the needs of farmers who are interested in post harvest activities. The restructuring is also aimed at strengthening the services provided and to advance the sector to make it more competitive.

In 2009 the government intensified its effort of exploring new export markets while consolidating its present markets. The search for new market opportunities is as a result of a higher volume produced and the falling prices on the traditional as against international market. Contracts were secured with Venezuela; efforts will be made to sustain and to pursue other favourable markets.

GRDB and the rice sector have benefitted from vital support emanating locally from the agencies under the Ministry of Agriculture, and from international partners such as the Inter-American Development Bank and the Spanish Government. We wish to thank all our partners for their commendable support and look forward to strengthen our relationships to propel the rice industry to new heights.

Mr. Nigel Dharamlall
Chairman



General Manager's Statement.



Mr Jagnarine Singh
General Manager

2009 could be described as a year of mixed fortunes for the Guyana Rice Sector. The year started with farmers suffering from flooding and ending with the second crop being one of the largest ever. There was also a decline in export prices when compared with 2008, but the prices were higher than in 2007.

During this year we produced the second largest amount of rice, with the third largest exports by volume, and the second highest in relation to value. After an almost frustrating change in the weather, in the first crop the resilience of the farmers was manifest when they successfully cultivated one of the largest crops ever in Guyana. Enabling this increase in production was Government's assistance to farmers in Region Five with seed paddy and fertilizers.

Additionally, there was an increase in the numbers of tractors, combines and other machinery in the sector.

Our Organization was also tested with reduced revenue, simultaneous to increased activities, as we embarked on some additional activities in 2009. This year GRDB has increased monitoring of the operations at rice mills and thus had to hire temporary staff to complement the permanent Quality Control staff.

Despite reduced operational revenues and other inhibitive constraints, GRDB ended the year with a positive cash balance - a turnaround position from the original budget, which showed a loss. A surplus of G\$27 million was recorded.

The rice research activities continued in 2009, with the objective being the production of varieties of paddy that are high-yielding, resistant to pest and disease, and adaptable to the changing climatic conditions.

There are five departments at the Burma Rice Research Station, i.e.: Plant Breeding, Agronomy, Entomology, Pathology, and Seed Production. The research programme includes experimental trials at the research station, in addition to field trials at selected farm sites.

The highlight of the research activity was the release of two new varieties (GRDB 09 and GRDB FG 10). By the second crop, approximately 1,000 ac each were cultivated in large acreage. These new varieties have yield potential of 45-50 bags/ac under good management practices.

Other research that was done during the current season resulted in 5,500 new breeding lines, which were tested for various desirable traits (disease resistance, morphological, agronomic, grain characters etc.). This is the largest set of material ever studied in Guyana at one time.

Our technology transfer programme can be considered a success, with fifty-one (51) Farmers' Field Schools established, at which 4,755 farmers participated. The re-introduction of



sampling farmers' fields and analysing the soil was made possible through an arrangement with Fertilizer Corporation of America and Agro Service International (ASI). A total of three hundred and fifty-eight samples were taken and analysed in the laboratory of ASI.

Another important activity was the signing of the initial agreement and subsequent export of paddy to Venezuela. Guyana's continuous dependence on the traditional markets would not sustain any developmental process, as we have experienced during the last five years, therefore the development of new and lucrative markets is a key element in the success and viability of the rice industry. 2009 also marked the final year for the subjection of Guyana's exports to quota restriction into the European Union Markets. In 2010 the quota and levy will be removed.

Once again we have seen the resilience of the farmers in recovering with positivity after a reduced first crop. They have ensured that we had one of the largest crops in the second half year. Our respect should be given to these hard-working farmers and millers, who continue to keep the rice industry stable as one of the primary economic pillars of Guyana.



Administrative Department

Organizational Structure:

For the year January 01 – December 31, 2009, the following persons were appointed to the Board of Directors, namely:-

NAMES	DESIGNATION
Mr. Nigel Dharamlall	Chairman
Mr. Dharamkumar Seeraj (MP)	Vice-Chairman
Mr. Leekha Rambrich	Director
Dr. Peter DeGroot	Director
Ms. Savitri Sukhai	Director
Mr. Ramsahai Ramnarain	Director
Mr. Mohamed Sattaur	Director
Ms. Shirley Edwards (MP)	Director
Ms. Prema Ramanah	Director
Mr. Jagnarine Singh	Ex Officoo

There were ten (10) statutory meetings of the Board of Directors.

Section 8 (1) of the Act provides for the appointment of 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 & QUALITY CONTROL
- c. RESEARCH & EXTENSION
- d. PROCUREMENT (SUB-COMMITTEEMembers of the various Sub-Committees are as follows:

LIST OF FINANCE & ADMINISTRATION SUB-COMMITTEE MEMBERS

NAMES	DESIGNATION
Mr. Mohamed Sattaur	Chairman
Ms. Shirley Edwards (MP)	Member
Mr. Jagnarine Singh	Member
Mr. Dharamkumar Seeraj (MP)	Member



Mr. Noel Sookhai	Member
Mr. Peter Ramcharran	Member
Mr. Madanlall Ramraj	Member
Ms. Prema Ramanah	Member
Mr. Nigel Dharamlall	Member
Ms. Savitri Sookhai	Member

There were ten (10) meetings of the Finance and Administration Sub-committee.

LIST OF MARKETING & QUALITY CONTROL SUB-COMMITTEE MEMBERS

NAMES	DESIGNATION
Mr. Nigel Dharanlall	Chairman
Mr. Mandanlall Ramraj	Member
Mr. Dharamkumar Seeraj (MP)	Member
Ms. Natasha Gaskin	Member
Dr. Peter DeGroot	Member
Mrs. Gloria Chester	Member
Mr. Jainarine Singh	Member
Ms. Allison Peters	Secretary

There were ten (10) meetings of the Marketing and Quality Control Sub-committee.

LIST OF RESEARCH AND EXTENSION SUB-COMMITTEE MEMBERS

NAME	DESIGNATION
Mr. Dharamkumar Seeraj (MP)	Chairman
Mr. Jagnarine Singh	Member
Mr. Ramsahai Ramnarain	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.



LIST OF PROCUREMENT SUB-COMMITTEE MEMBERS**JANUARY 01 - DECEMBER 31, 2009**

NAME	DESIGNATION
Mr. Nigel Dharamlall	Chairman
Ms. Shirley Edwards (MP)	Member
Mr. Dharamkumar Seeraj (MP)	Member
Mr. Jagnarine Singh	Ex Officoo
Ms. Prema Ramanah	Member
Mr. Kuldip Ragnauth	Secretary

There were nine (9) meetings of the Procurement Sub-Committee.

Organisational Structure of Guyana Rice Development Board

There have been no changes or additions to the Guyana Rice Development Board, which remains as follows:-

- 1 Finance
- 2 Administration
- 3 Marketing
- 4 Quality Control
- 5 Research
- 6 Extension
- 7 Internal Audit

Management Committee

The committee met as and when required, and for 2009 there were six (6) meetings of this committee.



LIST OF MANAGEMENT COMMITTEE MEMBERS

NAME	DESIGNATION
Mr. Jagnarine Singh (General Manager)	Member
Mr. Madanlall Ramraj (Deputy General Manager)	Member
(From June 8, 2009)	
Mr. George Jervis (Administrative Manager)	Member
Ms. Allison Peters (Quality Control Manager)	Member
Mr. Kuldip Ragnauth (Extension Manager)	Member
Mr. Peter Ramcharran (Accountant)	Member
(From June 22, 2009)	
Mrs. Elaine Reid (Accountant)	Member
Mr. Leroy Small (Chief Scientist)	Member
Mr. Bindraban Bisnauth	Member
Mrs. E.P. Isaacs (Occupational Health & Safety Officer)	Member
Dr. Mahendra Persaud (Plant Breeder)	Member

Staff Complement

One hundred and seventy-six (176) employees comprised the staff 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

(Admin)

Madanlall Ramraj

Deputy General Manager

Mr. Ian McKenzie

Driver

Ms Marcia Oxford

Security Guard

Nadira Ragnauth

Office Attendant

(Accounts)	Deomattie Seeram Administrative Assistant
	Peter Ramcharran Accountant
	Anilla Khan Data Entry Clerk
	Solomie Boston Cashier
(Quality Control)	Marsha Hohenkirk Research Assistant
	Loressa Mc Donald Grading Officer
	Carol Alleyne Technical Assistant
	Devwattie Das Agricultural Officer
(Audit)	Noel Sookhai Internal Auditor
(Moco Moco Project)	Lambert Chester Hinterland Co-ordinator
	Persaram Ramdat Hinterland Co-ordinator
	Olivia Simon Mechanic
Rice Research Station	
(Extension)	Rameshwar Samaroo Accounts Clerk
(Plant Breeding)	Colin Watson Research Assistant
Corriverton Branch Office	Sattish Jaikissoon District Rice Extension Officer
(Extension)	



Crane Branch Office

(Extension)

Surrendra Jairam

(Quality Control)

Technical Assistant

Anna Regina

(Extension)

Hardat Sahadeo

Field Officer

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 twelve (12) resignations and four (4) retirees.

Termination of Employment and Dismissal

There were six (6) terminations and thirteen (13) dismissals.

Occupational Health and Safety**The Board recognized HIV/AIDS as a workplace-based issue.**

The HIV/AIDS epidemic is not only a public health problem, but also has serious important economic and social implications for developing countries like Guyana. Considering the nature of its transmission, young people and the working population are more likely to be infected and affected. From the perspective of food security it is unarguable that, economically, the loss of human capital and earning potential is potentially devastating in the Guyana landscape, where HIV/AIDS is the number one cause of death among persons aged 25-44.

Initiative

In April 2008 the Board, after receiving a favourable response to its expression of interest to the implementation of an HIV/AIDS Prevention and Control Project, and subsequent to the development of an action plan, signed a Memorandum of understanding with the Ministry (MoH). Health Sector Development Unit for twenty million dollars (G\$20,000,000) for a period of twelve months, with proposed activities including:-

- Reducing stigma and discrimination



- Building capacity for the overall response
- Promoting behavioural change that reduces the risk of HIV/AIDS infection.

Among the notable successes in the list of achievements are:-

- The International Labour Organization Award for Outstanding Work.
- Both our internal and external clients benefited from training sessions in the areas of peer education, peer counselling and community mobilization.
- The work-plan was implemented within the period and was consistent with the MOU.

This project fell under the ambit of Occupational Health and Safety, which resulted in two-fold benefits for the beneficiaries. The Board was awarded first place in the medium business category for outstanding Occupational Health and Safety work.

Legal Issues

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

Medical Scheme

Employees contributed to this scheme, which is underwritten by Hand-in-Hand Mutual Insurance 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 the 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.



Finance Report

Table 1: DETAILS IN REVENUE EARNED

	ACTUALS G\$'000			Y.T.D. 09	
	2006	2007	2008	ACTUAL	BUDGET
Sale Commissions	229,066	297,818	279,629	268,185	404,087
Seed Padi Sales	55,652	48,311	119,116	92,843	76,600
Income from Investment	301	201	196	152	800
Licences - Mill	2,905	3,334	6,415	6,250	4,000
- Export	900	575	3,625	4,650	1,500
Grading & Inspection	613	412	396	239	-
Wharfage & Moorage	3,043	2,758	1,168	9	500
Gain on Exchange	148	35	53	118	100
Miscellaneous	2,611	8,387	13,285	19,464	-
Cleaning of Seed Padi	-	-	-	-	-
By-Products	348	476	947	1,347	500
ASSP	3,929	5,545	-	34,105	-
TOTAL	299,516	367,852	424,830	427,362	488,087

Revenue for the period under review is below the budget by G\$60.7m. There was 33% decrease in Sales Commission, and a 21% increase in Seed Paddy Sales.

CURRENT EXPENDITURE

Current Expenditure for the period under review was G\$16.6m, or 3.9% below Budget.

This is due to cost-cutting measures that were implemented during the year to reduce cost.

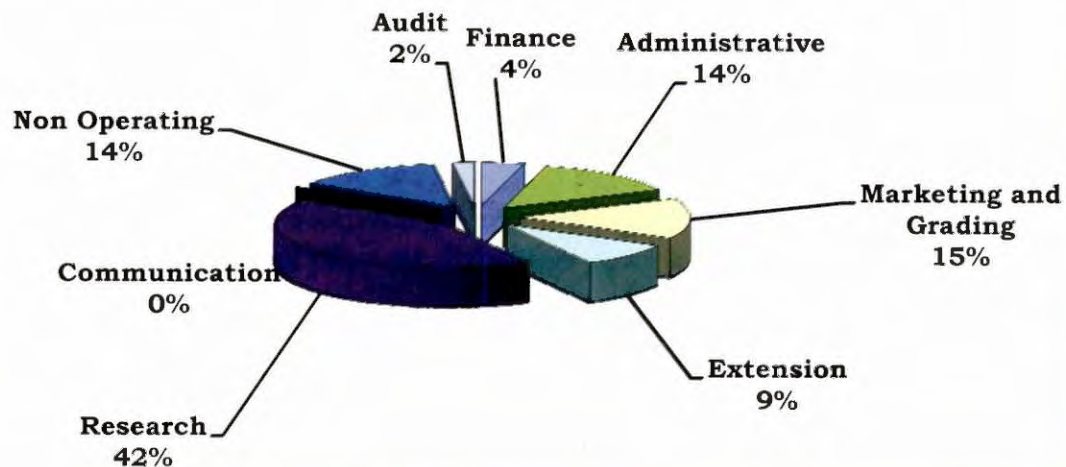
Capital Expenditure was \$15,673,000 for the year in review.

DIVISIONAL EXPENDITURE

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

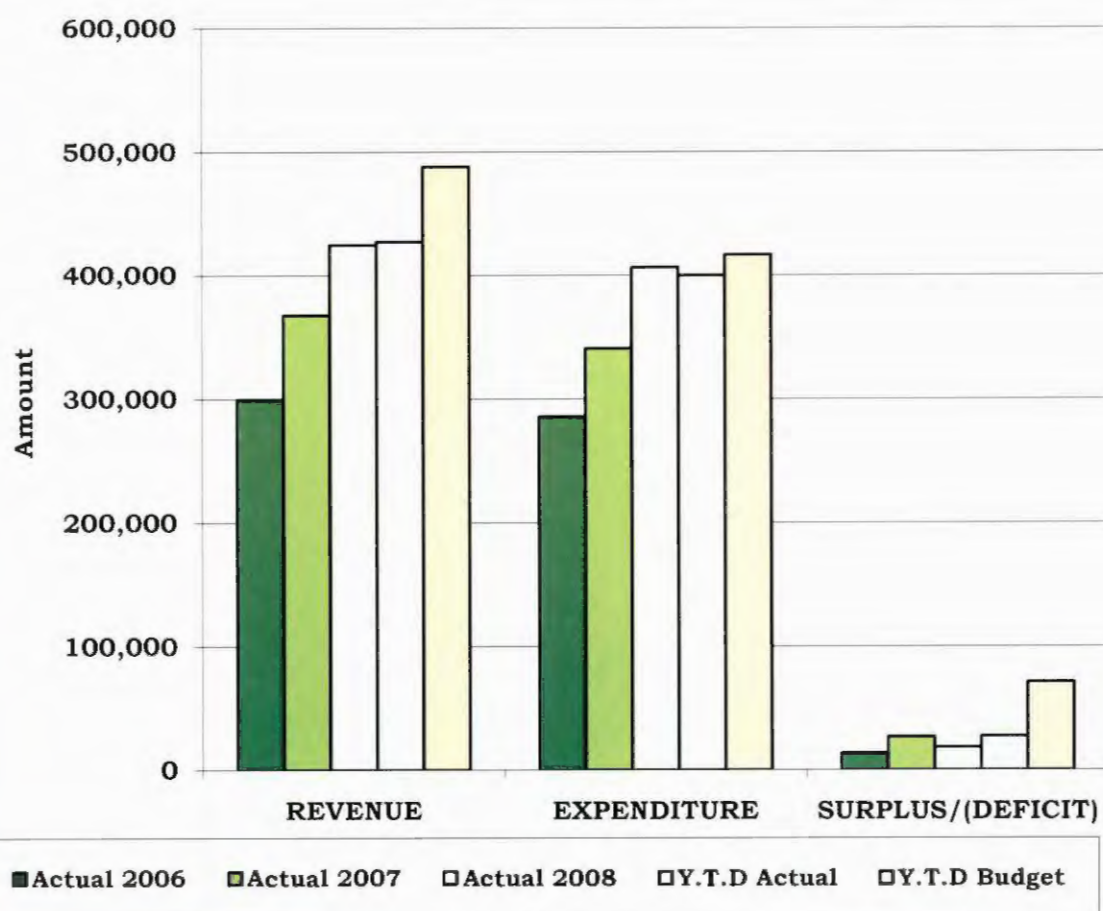
DIVISION	G\$'000	%
Finance	13,737	4
Administrative	55,160	14
Marketing and Grading	60,481	15
Extension	36,827	9
Research	164,523	42
Communication	-	
Non Operating	55,136	14
Audit	5,731	2
TOTAL	391,595	100

Divisional Expenditure



FINANCIAL PERFORMANCE

PARTICULARS	ACTUAL G\$'000			Y.T.D.	
	2006	2007	2008	Actual	Budget
REVENUE	299,664	367,852	424,830	427,362	488,087
EXPENDITURE	285,936	340,958	406,365	399,995	416,636
SURPLUS/(DEFICIT)	13,728	26,894	18,465	27,367	71,451

Table 3: Showing Financial Performance

The corporation recorded an operating surplus of G\$27,367m, or 38% of the Budget. Even though there was a decrease in revenue earned of 14% the decrease reflected was mainly due to a decrease in the commission rate charged for the period.



Research Highlights for 2009

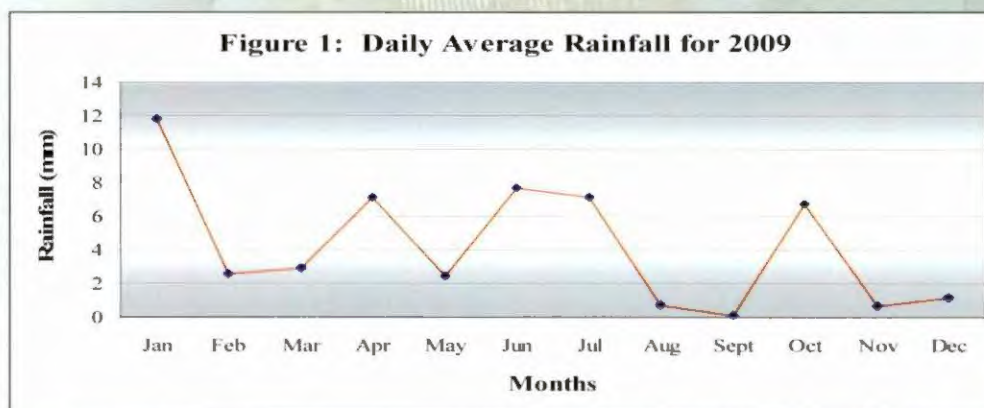
Rainfall Rice Research Station Burma, Mahaicony.

The highest daily average rainfall was recorded in January, with a total of 367.5 mm. It can be reflected as a continual downpour from the previous month of December, 2008, which had a total of 853.4 mm of rain. Other wet months were April, June, July and, to a lesser extent, October, where the total monthly rainfall recorded were 216.1 mm, 232.0 mm, 222.6 mm and 208.9 mm, respectively. Such precipitation would have coincided with sowing and early vegetation growth stages, which affected the experimental plots and commercial fields during June and July. Similarly, the wet periods during April and October had a severe impact on harvesting and drying. A summary of the daily average rainfall and total rainfall for each month, as recorded at the Burma location for 2009, is given below:

Table 4: Rainfall for 2009

Month	Rainfall (mm)	
	Daily Average	Monthly Total
Jan	11.85	367.5
Feb	2.62	73.3
Mar	2.98	92.4
Apr	7.20	216.1
May	2.50	77.6
Jun	7.73	232.00
Jul	7.18	222.6
Aug	0.77	24.00
Sept	0.14	4.1
Oct	6.74	208.90
Nov	0.66	19.8
Dec	1.17	36.60
Avg. / Total	4.30	1574.9

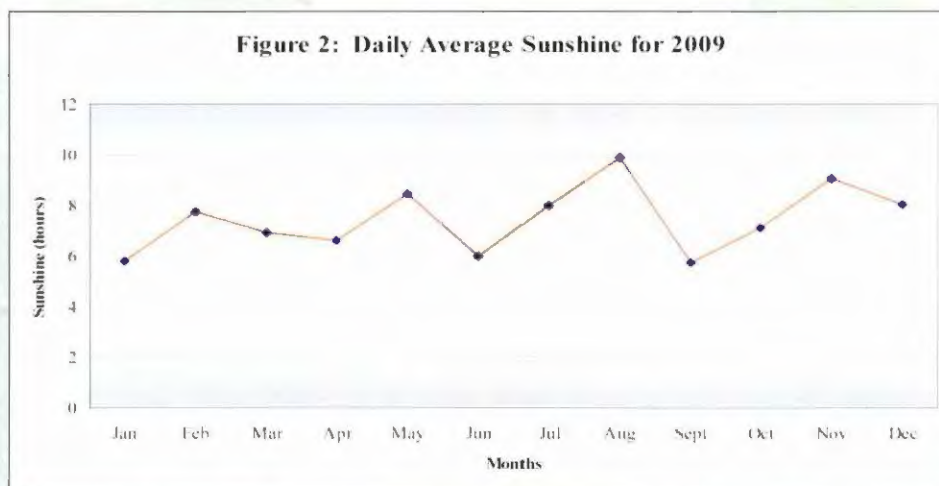
Figure 1: Daily Average Rainfall for 2009



Sunshine

The most favourable month was August, with a daily average sunshine of 9.86 hours. Other favourable months of greater than 7 hours per day were February (7.7), May (8.40), July (7.94), Oct (7.09), November (9.05) and December (8.0). The month of July falls in the intersection between being a wet month and one that had favourable sunshine hours, which indicated that both situations occurred on the same day, for some days. The data suggested that either it could have rained during the night, or the rainfall was short but intense for both to have occurred on the same day. In general, the latter part of the year was more favourable. A summary of the daily average sunshine and total sunshine hours for each month, as recorded at the Burma location for 2009, is given below:

Month	Sunshine (hrs)		Comments
	Daily Average	Monthly Total	
Jan	5.73	177.6	
Feb	7.7	215.8	
Mar	6.86	212.8	
Apr	6.58	197.5	
May	8.4	260.4	
Jun	5.93	177.8	
Jul	7.94	246.2	
Aug	9.86	305.6	
Sept	5.7	170.8	Reading for 19 days
Oct	7.09	220	
Nov	9.05	271.7	
Dec	8.01	248.6	
Avg. / Total	7.4	2704.8	



Plant Breeding

The objectives of the Breeding Programme are as follows:

- A. Developing high-yielding varieties (>6.5 t/ha), with tolerance to lodging; stable resistance to blast; high milling (HRR 55/TRR 70); excellent cooking qualities;
- B. Evolving varieties of different grain types to meet requirements of diverse export destinations;
- C. Developing a variety with tolerance to salt;
- D. Developing aromatic varieties;
- E. Maintaining genetic purity of commercial varieties and production of sufficient quantity of seeds of high genetic purity;
- F. Decentralization of Seed Production (off-station seed production);
- G. Germplasm Management.

To achieve these objectives, the following activities were executed:

1.0 On-Farm Trials (OFT)

On-farm testing of two new strains, *viz.* G04-08 and FG05-259, during the first and second crops of 2009 confirms their superiority over the commercial varieties being grown. The grain yield performance over the two seasons for G04-08 and FG05-259 were 6.1 t/ha and 7.0 t/ha respectively, which represented a 15 % and 30 % advantage over their corresponding check varieties. The strain FG05-259 showed a tendency to lodge in some of the larger plots - (10-20%) in the first season and in the second season it was much higher. However, the G04-08 indicated no signs of lodging. These new strains possess excellent milling and cooking qualities, with resistance to disease. G04-08 and FG05-259 were named as GRDB 09 and GRDB FL10 and have been tentatively released as commercial varieties for cultivation in Guyana, whilst their performance is still being observed by the research and extension team.

2.0 Advanced Yield Trials (AYT)

Twelve promising early duration (< 110days) 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, West Demerara, and Essequibo over two seasons (first and second 2009). Strain FG06-98 was promoted for further testing at a semi-commercial level in first crop 2010. Another nine strains of medium duration (>110 days), along with three checks (G04-08, G98-30-3, 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 crop 2010.



3.0 Observational Yield Trial (OYT)

There were initial assessments of new materials for yield potential and other important characters in an observational yield trial at the Research Station. Thirty-eight strains were studied, along with three checks in an augmented design over two seasons. Two strains (G07-106, G08-109) were promoted for further testing in the Advanced Yield Trials during first crop 2010.

4.0 Breeding Material

Seventy-eight F_2 populations were studied during the second crop of 2009. At least one thousand selections were made. During the first season 5182 progenies (F_3 to F_8 generation) were studied in pedigree nurseries and 5105 selections were taken. In the second season 5105 progenies were evaluated and 3300 single-plant selections were taken. Ten 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 F_1 Generation.

Seventy-five crosses were made during 2008 (16 in first crop and 59 in second crop). Hybridization aimed at creating variability for increasing yield potential (33), salt tolerance (12) and aroma (30) was effectively done. The crosses made in the first crop were successfully raised in the second crop of 2009. Those made in the second crop will be raised in the first crop of 2010.

6.0 Seedling Emergence Study

Studies were conducted during the first and second crops of 2009 to test the general performances of the two new strains' and older varieties' ability to emerge from varying water depths. Of the five entries studied, (GRDB 09, GRDB FL10, G98-30-3, FG 05-298 and Rustic), 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).

7.0 Germplasm Management

Six hundred and eighteen accessions were rejuvenated in the second season of 2009. Two hundred and thirty-six accessions were received from the International Rice Research Institute. These were multiplied during the second season. Five hundred and forty-four entries were received from FLAR during the second crop of 2009. These will be grown for observation in first crop of 2010.

8.0 Strain Purification

One hundred and twenty-six 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 of all the varieties were grown and studied during both seasons of 2009. The genetic purity of the varieties was maintained and eleven thousand selections were made. More than 5000 kg of pre-basic seed (for all the varieties) were produced over the two seasons of 2009.

In the first crop of 2009 more than 40 tonnes of basic seed were produced off-station by farmers from five varieties (G98-22-4, G98-196, G98-135, BR 444, G04-08). Some of the seeds produced were retained by the farmer for his own use and the remainder sold to farmers in the respective regions. During the second crop 42 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 Research Station. Seed generated here were supplied to seed production of the research station and to seed growers in the various regions for multiplication in the first crop of 2010.

Plant Pathology

Rice blast, caused by the fungus *Pyricularia grisea*, is of great concern to the rice industry. In order to combat this disease, it is necessary to incorporate resistant genes during the varietal development programme. During 2009, the identification of breeding materials that are resistant to the blast disease was the primary focus of this department. A total of 5105 lines were screened for Blast resistance, out of which 1200 were Highly-Resistant, 1650 were Resistant, 840 were Moderately Resistant, 800 were Moderately Susceptible, 415 were Susceptible or Highly Susceptible, and 200 did not germinate.

Agronomy

The following activities were conducted by the Agronomy Department:

1. Evaluation of herbicides for post-emergent weed control in rice.

- a) **Generics of Nominee** – The herbicides Rice Weed Killer, Nomimattie and Designee, which are all generics, were compared to the original product Nominee for their effectiveness for weed control. These herbicides showed comparative effectiveness for the control of a wide spectrum of weeds. The rates which provided the most effective control, as compared to Nominee 60 ml/ac, were Rice Weed Killer @ 60 ml, Nomimattie @ 240 ml, and Designee @ 100 ml/ac.

- b) **Evaluation of new herbicide formulations** – Spada seems to be a good prospect for weed control, especially for Schoonord grass. However, a slight level of toxicity was observed, but the crop was fully recovered within 7-10 days, without any yield losses. Ricestar and Estalion also seem promising. However, further evaluations are required before making any recommendation.



2. Evaluation of breeding lines (G04-08 and FG05-259) under varying seeding densities and nitrogen levels.

Season 1: Under the two nitrogen regimes (165 and 330 lb/ac urea), both breeding lines produced highest grain-yield at lowest (80 lbs/ac) seeding density. However, this was non-significant as compared with the other seeding densities.

Season 2: With regards to nitrogen, panicle length was longest with 150 kg N/ha. Other parameters, such as plant height, tillering, grains per panicle, 1000-grain weight, and grain-yield were all non-significant. In terms of seeding density, plant height, panicle length and filled grains were significantly high at 80 lbs/ac, as compared with 160 lbs/ac. These parameters were at par with 100, 120 and 140 lbs/ac. Effect on grain yield, 1000-grain weight and unfilled spikelets were non-significant.

3. Evaluation of foliar and soil-applied organic fertilizers in rice for yield enhancement.

Both foliar and soil applied organic fertilizers at various combinations did not significantly enhance grain yield after two seasons of evaluation, when compared to present synthetic fertilizer recommendation. Neither did it influence growth parameters (plant height and tillering), nor attributes pertaining to yield increase, which are panicle length, filled grains per panicle, and 1000-grain weight.

4. Increased yield and quality of lowland rice by the use of evergreen.

Application of Evergreen @ 1.0 L/ha to rice at tillering, panicle initiation and flowering produced significantly high grain-yield, as compared to Evergreen @ 0.5 L/ha at the same application timing. However, it was at par with recommended fertilizer application and Evergreen @ 1.5 L/ha. The response obtained with Evergreen application, when compared to recommended fertilizer alone, is too small, thus the additional cost for application is not economical.

5. Comparing the efficacy of urea briquettes with normal urea at different levels of nitrogen for growth and grain-yield of rice.

Urea briquettes applied at 84 kg N/ha 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, provided adequate amount of nitrogen for high yields. Also, this form of nitrogen was present throughout the growth of the crop due to its slow release nature.



Entomology

Studies on the major rice insect pests in 2009 continued to focus on establishing trends of peak activity; screening of improved (novel) insecticides for short-term control; evaluation of advanced breeding lines for resistance; and establishment of tolerable injury levels for the rice water weevil, *Helodytes foveolatus*. The major rice insect pests are water weevil (*Helodytes foveolatus*), leaf miner (*Hydrellia sp*), caterpillar (*Spodoptera frugiperda*), and paddy bug (*Oebalus poecilus*).

Monitoring

In investigating the peak insect activity, weekly monitoring was done at the Rice Research Station in cropped and non-cropped areas, using a sweep net. There was a high incidence of paddy bugs in the non-cropped areas during the early growth stages of the rice crop. This situation allowed the bugs to reproduce and increase in numbers before the crop reached the susceptible grain-filling stage, since a high number of bugs were caught in the fields during March to April, and August to September, for the first and second crops, respectively. It suggests that field sanitation, as part of the Integrated Pest Management (IPM) programme, should be done soon after the crop is sown so that paddy bugs do not have an environment in which they can survive. Daily light trap data was collected and recorded, which indicated a total of 65 different species caught during the year. The stem borer (*Rupela albinella*) was abundant during March to June and peaked in May, while the brown plant hopper (*Tagosodes orizicolus*) and paddy bug (*Oebalus poecilus*) peaked in September and October, respectively. Similar trends need to be established over an extended period of time in order to ascertain the periods of peak insect activity for individual insects, which can also be correlated with weather data.

Screening of Insecticides

Several new insecticides were evaluated during the year against the early season pests and paddy bug at the small plot, semi-commercial and commercial levels, using both the seed treatment and foliar methods of application. In the foliar application studies, Engeo (Lambda-cyhalothrin) completed its final stages of testing up to the commercial level and proved effective in controlling the major insect pests at the rate of 100 mls/ha. It should be included on the list of insecticides recommended for the control of insect pests of rice. Leaf guard (Cyromazine), Padan 50SP (1,3-bis(carbamoylthio)-2-(N,N-dimethylamino)-propane hydrochloride), Jade 35EC (Imidacloprid) and Monarca 11.25EC (Thiacloprid+B-cyfluthrin) give excellent control at the semi-commercial level against the early season pests. However, further testing is required against paddy bug and at the commercial level. Muralla Delta 19 OD (Cloronicotinilo, Piretroide, Imidacloprid and Deltametrina) and Ninja (alpha cypermethrin) were evaluated at the small plot level and results were promising.

Seed treatment studies focused on achieving control for water weevil and leaf miner for approximately 30 days after sowing. Small plot studies with Cruiser 35 FS (Thiamethoxam), FLIP 800 DF (Fipronil), Pronto (Imidacloprid), Monarca (Thiacloprid), Jade (Imidacloprid) and Regent (Fipronil) were conducted in both seasons. The Cruiser, Pronto and Regent plots had effective control for water weevil and leaf miner, while the incidence of leaf miner was about



10% in the Flip, Monarca and Jade plots. During the first season, semi-commercial studies on Cruiser were conducted in 4 locations. Cruiser was found to give effective control against the early season pests in all the areas, as well as a boost in yield and crop vigour. Although it was studied for only one season at this level, the preliminary results suggest that it can be used for rice cultivation in Guyana, especially since it is in a formulation that is specific for seed treatment; applicable on a large scale; can be applied prior to storage; and most importantly, it offers an additional benefit to farmers in terms of improved crop vigour and increase in yield. The effectiveness of seed treatment for the control of water weevil and leaf miner can allow for its inclusion in the IPM package, especially for fields that have a history of infestation of these early season pests.

Evaluation for Plant Resistance to Insects

21 advanced breeding lines were studied for their resistance against the major insect pests. All the entries had different levels of infestation based on the percentage damaged caused by the pests. It is required that this evaluation be conducted for at least one more season. Screening of advanced breeding lines will be an ongoing exercise in the hope of finding resistance to any of the major insect pests.

Evaluating Injury Levels

In studying tolerable injury levels for the rice water weevil, *Helodytes foveolatus*, rice plants were infected with 0 (control), 3, 5 and 7 water weevil larvae per plant at 18 and 30 days after transplanting. It was found that plants infested with 3 water weevils per plant produced more tillers and panicles than the control. This is probably due to the plants being triggered from the feeding of the larvae to compensate for the damage. However, those infested 7 water weevils per plant caused significant ($P \leq 0.05$) damage. More studies will be conducted to ascertain these results. This study was adopted for a final-year research project at the University of Guyana.



Extension Division

Extension Division

During the year the Extension Division continued with its programme of meeting farmers' needs in all the rice-growing regions. This was with the view to improving the production of rice in the country.

1. Seed Production and Marketing

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

The extension division is held responsible for the marketing of seeds, produced by the Burma Rice Research Station, which is approved for sale. Towards this end a total of twelve thousand four hundred and forty-nine (12,449) bags were distributed to farmers during the year.

VARIETIES (Bags)											
Re- gion	Rus- tic	G98 22-4	G98 30-3	F710	BR444	G98 196	Di- wani	G98 135	GRDB 9	GRDB 10	Total
2	298	557	93	36	65	276	0	196	45	158	1724
3	197	259	244	129	115	311	99	633	55	64	2106
4&5	222	778	1131	187	244	371	408	1605	289	341	5,576
6	130	29	164	95	41	1007	91	1424	26	36	3,043

**Table 6: Showing Varieties Of Seed Padi Distribution
Across The Rice Growing Regions.**

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

Seeds purchased from the Burma Rice Research Station are monitored for overall performance in terms of germination and establishment during the early stages of growth. Towards this end, approximately two thousand five hundred and twenty-one (2,521) acres were inspected.

c) Monitoring of Seed Fields at Burma Rice Research Station

At the Research station seed fields amounting to six hundred and eighty four (684) 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 they produce the intended class after multiplication. About nine thousand and thirty seven (9,037) acres met the requirements for seed as a result of this exercise.

2. **Technology Application**

a) **Developing Competency of extension staff**

In its thrust to develop a core of highly-skilled staff the division enhanced the training of the individuals in the following areas, viz: improved crop management practices, balanced nutrition, management of pesticides, post-harvest management of padi, on-farm research, review of farmers' field school operations, community mobilization, and HIV/Aids .

On a routine basis, weekly meetings (192) were held in each Region, and monthly (12) at the central level to assess the respective work programme within and among the various Regions, respectively.

b) **Technology Transfer**

The focus on making improved technologies available to farmers continued in greater urgency during the year. Farmers, participatory groups in the form of Farmers' Field Schools continued to be the main strategy to train farmers.

A total of fifty-one (51) Farmers' Field Schools (FFS) were established throughout the country and 4,755 farmers participated in the 686 sessions that were held.

Region #	# of Schools	# of Sessions	# of participants.
2	6	84	838
3	17	238	1,582
4	5	73	430
5	9	109	782
6	14	182	1,123
Total	51	686	4,755

**Table 7: Showing The Number Of Field Schools Held In
The Rice-Growing Regions.**

Eight (8) review sessions were held where the seasons' programmes were discussed to highlight areas that needed strengthening. Planning of the following seasons' activities was also done at the meetings.

Through an arrangement with Fertilizer Corporation of America and Agro Services International (ASI), a six-point improved crop management practice, involving balanced nutrition, was conducted with rice farmers, during which 31 demonstrations were established during the Autumn Crop. For the year seventy two (72) demonstrations were carried out in farmers' fields. Additionally, three hundred and twenty-seven (327) soil samples were collected from farmers' fields and analyzed by Agroservices International. Recommendations as to the fertilizer regime to be applied to the fields were also received from ASI.

Eight (8) exchange visits were held to allow farmers from one Region to observe what their counterparts were doing in another Region.

Farmers' training continued under the Agriculture Sector Support Programme in Regions 3, 4 and 6.

Fourteen (14) brochures, covering various aspects of rice production, were distributed to farmers. Training manuals on best practices for growing rice were also being made available to farmers.

The establishment of the on-farm programme (AYT trials and promising lines) in farmers' fields continued with the involvement of research, extension, 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 (1) and Cost of Production (1) were also compiled for each crop.

A database comprising of all farmers and their respective acreages sown was completed during the year. The information was used to determine the amount of fertilizer farmers were entitled to as part of Government's assistance to the sector.

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 supports regular extension activities.

Activity	Agency	Regions	No. of days
Mill Monitoring	GRDB	2 and 6	86
Exhibitions	MOA,GRDB	2,4,6	3
Community Assistance	GRDB,MOA,MOH	5	10
Minister's visits	MOA, GRDB, RPA	All Regions	16

Investigations	GRDB, RPA	All Regions	13
Farmers' meetings	MMA, RDC, RPA, GRDB, NDC,NDIA,GAPA	All Regions	71
Meetings/Workshops	MOA, GRDB, ASI,ILO,GG,PTCCB	All Regions	41
Retreat	GRDB	5	1
Flood Survey	GRDB,RPA	All Regions	9
Water-testing	GRDB	All regions	31
Consultant's visit	ASI,FLAR, GRDB	All Regions	17
Special Meetings	MOA,GG,PTCCB	All Regions	8

**Table 8: Showing The Amount Of Special Activities Held In
The Rice Regions In 2009**

Exhibitions include GUYEXPO, Berbice EXPO, and Essequibo Nite.

Community assistance is related to distribution of flood relief vouchers, fuel, health kits and HIV/Aids testing.

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

Farmers' meetings were focused on issues related to growing of the crop and 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.

Meetings are those other than the scheduled farmers' meetings, and include meetings with senior officials of all agencies. Participation at the Regional Meeting of Pesticide Control Boards, the launching ceremony of the seed treatment programme, Cruiser and GAPA was also considered.



Marketing Report

Rice Exports

2009 was a prolific year for the rice industry, despite declining international prices for rice. Rice Exports for 2009 totaled 260,815 mt, as compared to 196,233 mt of rice in 2008. This represents the third highest rice export level in the history of the GRDB and an increase of 33% in the quantity of rice exported, when comparing 2009 with 2008. The major markets for Guyana's rice continued to be the EU and CARICOM regions, with the quantity of rice exported to the EU increasing by 37% i.e., from 99,500 mt in 2008 to 135,991 mt in 2009, while that of the CARICOM region increased by 27%, i.e. from 69,450 mt in 2008 to 88,485 mt in 2009.

The increase in the quantity of rice to the EU can be attributed to the removal of the rice quota for Guyana's rice exports to the EU, while the increase in rice exports to CARICOM can be attributed to the new agreement signed between Guyana and Jamaica to export 60,000 mt of rice yearly. This new quota has allowed Guyana to increase its rice exports to Jamaica by approximately 31% in 2009, as compared to 2008, thus increasing its overall exports to the CARICOM region.

In addition, rice exported to other countries was increased by 50%, i.e. from 21,567 mt in 2008 to 32,351 mt in 2009, which was partially due to paddy exports to Venezuela. However, there was a significant decline in the yearly quantity of rice exported to the OCT region of approximately 30%, i.e. from 5,715 mt in 2008 to 3,988 mt in 2009. This was due to the fact that the only country that rice is exported to in the OCT is Aruba and rice exporters had a preferential market. However, that preferential market has been erased and, as such, it is no longer very profitable to export rice to Aruba, as compared to the EU and CARICOM.

The 2009 rice export values totaled US\$ 114,120,324, as compared to US\$ 118,032,802 in 2008. This represented a decline of 3% in the overall value of rice exported in 2009, as compared to 2008. This decline in the overall value for rice was due to declining rice prices for all rice types. An examination of the prices of the four main rice types exported by Guyana, namely: Cargo rice, Parboiled rice, White rice and White Broken rice, reveals that average prices for 2009 declined by 33.1%, 17.6%, 23.2% and 44.4% respectively, as compared to 2008. With such huge declines in individual rice-type prices, it is of no surprise that, despite the quantity of rice exported increasing by 33%, there was still an overall decline in the value of rice exported of 3%.

Major Rice Trade Issues Arising in 2009

An agreement was signed between the Guyana Rice Development Board (GRDB) and Casa, a Venezuelan company, for the exportation of 40,000 mt of paddy and 10,000 mt of white rice (5% broken) from Guyana to Venezuela. The agreed export price for paddy was US\$330 per mt, while that of white rice was US\$550 per mt. While this was just a 'one-off agreement,' it is hoped that new agreements will come onboard between Guyana and Venezuela in 2010, which should ensure the exportation of rice from Guyana to Venezuela on a regular basis.



It should be noted that Guyana has already secured trade agreements with Jamaica to export 60,000 mt of rice yearly, and the EU – exportation of rice on a quota-free and duty-free basis from 2010. Rice is also exported to CARICOM countries on quota and duty-free bases.

The GRDB is continuing to strive to secure new markets in 2010 as it continues its drive to increase growth within the rice sector, thereby driving agriculture sector growth, as well as overall economic growth for Guyana.

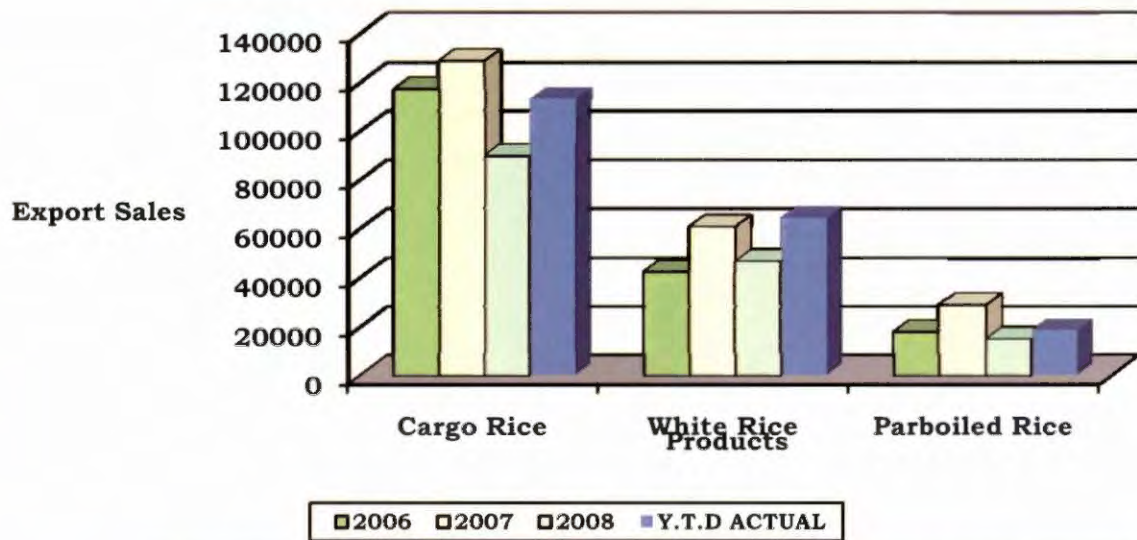
EXPORT SALES AS PER PRODUCT

Table 9: Showing export sales as per product

PRODUCT	ACTUALS			Y.T.D	
	2006	2007	2008	ACTUAL	BUDGET
Cargo Rice	117,179	128,764	89,915	113,027	93,000
Cargo Broken	3,072	3,968	5,190	8,068	10,300
White Rice	42,501	60,814	46,771	64,405	78,200
White Broken	10,322	26,126	18,471	31,309	12,700
Parboiled Rice	17,804	28,881	15,017	18,408	15,300
Parboiled Broken	3,598	2,097	2,483	2,601	4,250
Cargo Parboiled Rice	6,786	11,360	9,300	5,198	21,000
Cargo Parboiled Broken	775	2,126	119	1,275	2,900
Padi	36	-	36	5232	-
Bran	1,382	2,586	545	2,061	-
Others	1,121	2,714	8,385	9,231	-
Total	204,576	269,436	196,232	260,815	237,650

From the table above, Cargo Rice exported for the period under review represents 43% of the total, followed by White Rice 25%, White Broken 12% and Parboiled Rice 7%.





Cargo Rice, White Broken and Parboiled Rice exports exceed budget level by 21%, 46% and 20% respectively, whilst there is a shortfall of the remaining products compared to the budget.

Export Market Sales

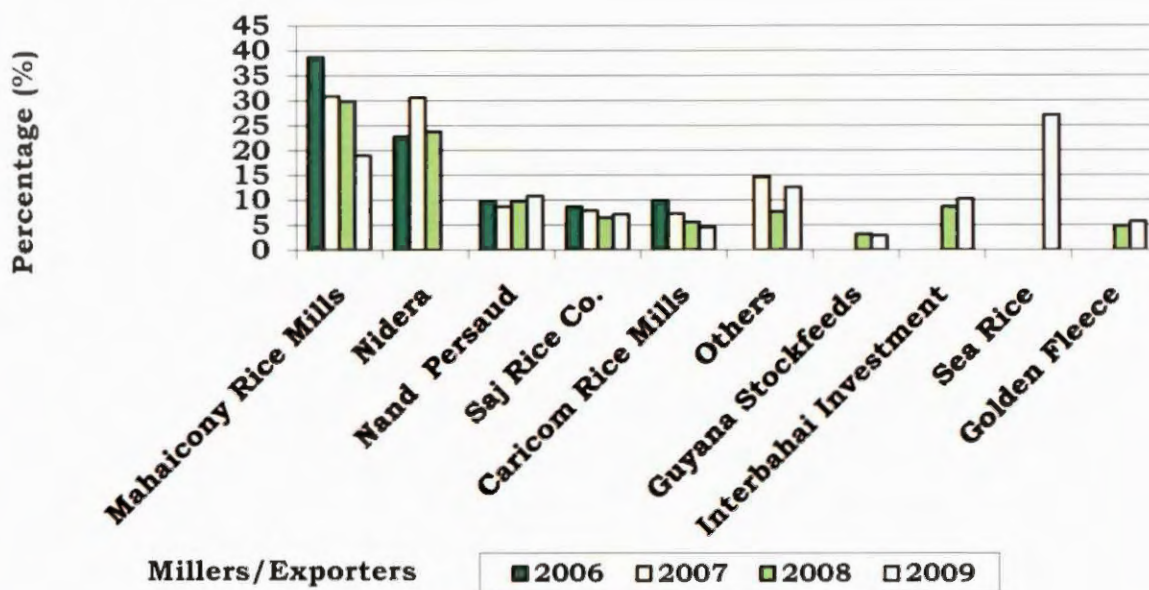
Table 10: showing quantity of rice Export by Exporter

EXPORTERS	2006	2007	2008	2009		
Mahaicony Rice Mills	38.7	30.9	29.9	18.98		
Nidera	22.8	30.6	23.8	-		
Nand Persaud	9.8	8.7	9.8	10.83		
Saj Rice Co.	8.7	7.9	6.5	7.15		
Caricom Rice Mills	9.9	7.3	5.6	4.55		
Others		14.6	7.7	12.6		
Guyana Stockfeeds			3.2	2.9		
Interbahai Investment			8.7	10.24		
Sea Rice				27.04		
Golden Fleece			4.8	5.71		
				100		

Listed above are the percentages of total exports for the period 2006-2009. Sea Rice has the highest level of exports of 29.9%, followed by Mahaicony Rice Mills 18.98%, Nand Persaud 10.83% and Interbahai Investment 10.24%. Sea Rice a new rice company was formally Nidera



Exports for 2006-2009



Quality Control Department

Introduction

The department continues to strive to ensure that all rice and rice by-products are certified in accordance with contract specifications or the relevant standards.

In the pursuit of this goal, the department has been hard-pressed to ensure that no rice, nor by-products, left Guyana below the relevant standards. We continued to place temporary Grading Officers at mills that were purchasing paddy during both crops, to ensure that the paddy trade met the requirements of the Rice Factories Act, allowing for a fair trade at all times.

There has also been a marked improvement in the payment by millers to farmers. We envisage an even greater improvement in payment with the implementation of the Rice Factories Amendment Act 2009.

The department continues to work with the owners of the smaller mills that "toll mill" paddy on behalf of farmers, ensuring that the transactions are properly documented and farmers receive receipts of the transactions.

Mill Licensing

Sixty nine (69) mills were licensed during the year under review. This licencing period saw the licensing of one (1) new rice mill in the Region 2 area. Although 69 mills were licensed in 2009, there was a decrease in the milling capacity.

Region	2	3	4 & 5	6	Total
No. of licensed Mills	15	18	13	23	69
Milling capacity (mt/h)	65.75	39.5	110.5	48.5	264.25

Table 11:- Shows A Breakdown Of The Milling Capacity Of Licensed Mills Per Region.

Training

(a) Stakeholders' Training

Training in post-harvest management and grading was intensified during the year, with two (2) training programmes being held.

The schedule below highlights the training periods and venues where same were held.



Date	Location	Venue	No of Trainee
January 27-29, 2009	Region 2	GRDB Office	24
July 28-30, 2009	"	Anna Regina E/bo	
January 6-8, 2009	Region 3	GRDB Office	10
August 4-6, 2009	"	Crane, WCD	
January 13-15, 2009	Region 4 & 5	GRDB Burma Rice	23
July 21-23, 2009	"	Res. Station ECD	
January 20-22, 2009	Region 6	GRDB Office	14
August 11-13, 2009	"	Corriverton, Berbice	

Table 12: Shows The Training Sessions Held In Warehouse Management And Stock Control 2009 By Licenced Graders

A total of Seventy-one (71) persons were trained as licenced graders during 2009.

Staff Training

Seven (7) sessions of internal training on the grading procedures were conducted during the year. This is a requirement of the Guyana National Bureau of Standards, as a prerequisite criterion for the Central Laboratory, for graders to become certified. Several other training sessions were attended, viz:-

- a. Post-Harvest Management and Paddy Grading
- b. Twenty milestones to Accreditation
- c. Laboratory Accreditation Training
- d. Sanitary Phytosanitary Measure Training

Quality Control/Extension Collaboration

Staff worked together during the "Field school" programmes to ensure that farmers were updated on information available, with respect to the grading procedures and practices to be observed during the sale of paddy at mills.



Data Collection

This is an integral part of the department's work, which ensures that data is available to all stakeholders on the availability of stocks, i.e. paddy, rice and by-products, locally. Data is collected from mills countrywide, as well as from shops and supermarkets on a bi-monthly basis. This is a mandate provided by the Rice Factories Act.

Laboratory Certification

After several reviews of the Quality Manual and the relevant supporting procedures, the Central Laboratory of the Board is scheduled to have its laboratory certified to the ISO17025 standard by May 2010.

Work is still ongoing, after several reviews, for the Inspection Manual to become certified to the ISO17020 standard. GNBS and GRDB officers are working assiduously to have the certification completed by December 2010.

Regulations (Amendment) 2009

The Rice Factories Amendment Act 2009 was assented to on 22nd December, 2009 by his Excellency the President, Dr. Bharrat Jagdeo. This Amendment will facilitate improved payment to farmers for the sale of their paddy.

Seed Certification

Officers of the department certified seed for distribution to the industry as follows:-

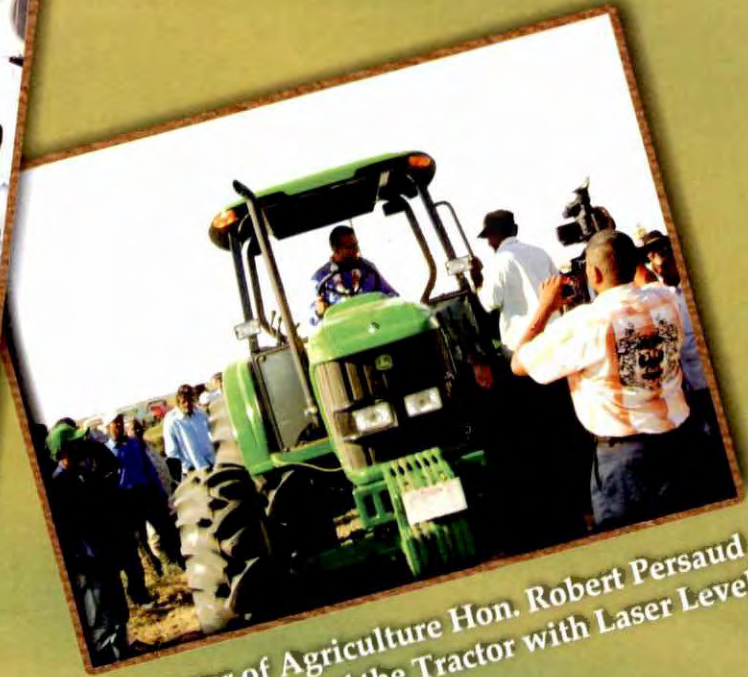
Commercial	6182 bags
C1	5348 bags
C2	8010 bags



Activities in 2009



Awarding of Bursary 2009

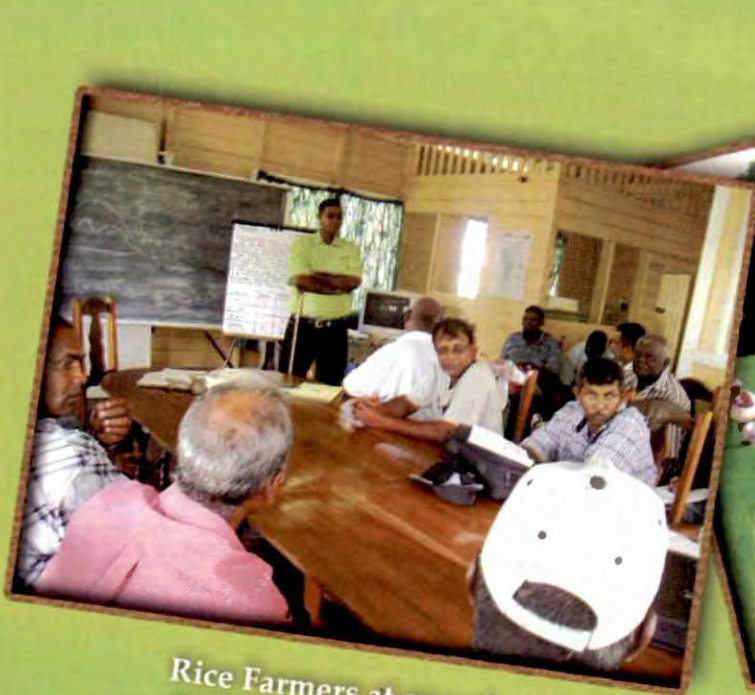


Minister of Agriculture Hon. Robert Persaud
Commissioning of the Tractor with Laser Leveler

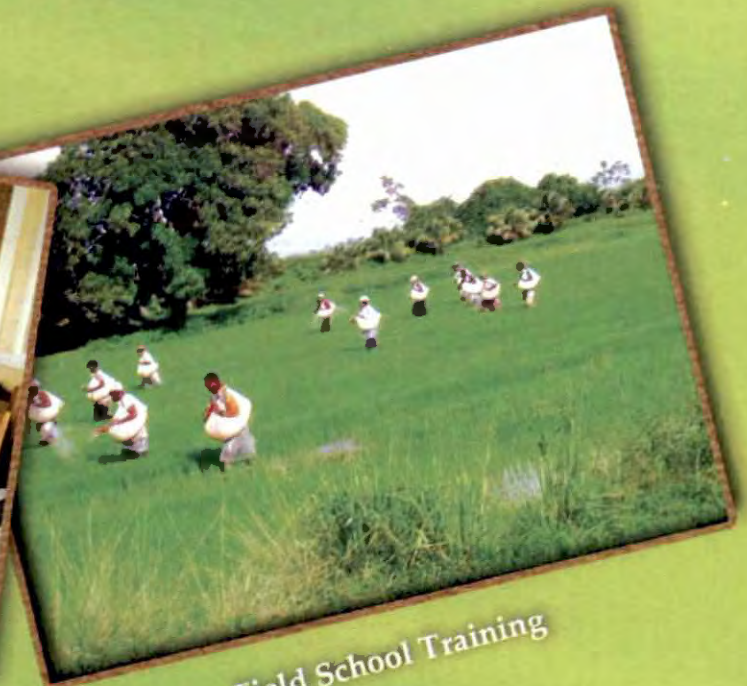


Visitors at the Commissioning of Tractor
With Laser Leveler at BRRS

Activities in 2009



Rice Farmers at one of
Aids Training Session



Field School Training



President Dr. Bharrat Jageo visit
GRDB Booth at Berbice Expo 2009

GUYANA RICE DEVELOPMENT BOARD

Heads Of Department



Dr. Mahendar Persaud
Plant Breeder



Mr. Madanlall Ramraj
Administrative/
Deputy General Manager



Ms. Allison Peters
Quality Control Manager



Mr. Bindraband Bisnauth
Farm Manager



Mr. Noel Sookhai
Internal Auditor



Mr. Kuldip Ragnauth
Extension Manager



Mr. Peter Ramcharran
Accountant

A black, rounded rectangular graphic with a circular hole on the left side, containing the word "Staff" in white, bold, sans-serif font.**Head Office**

General Manager

Jagnarine Singh

Dip. Agriculture

(GSA), B. Sc. Agriculture (UG)

M. Sc. Marketing (U.A.R.K.)

Administration Division

Deputy General Manager

Madanlall Ramraj

Master of Business Administration, (MBA)

(GPA 3.8) (British Colombia)

Bachelors of Business Administration and
Management (BA) Honors (GPA 3.5)

(Toronto)

Occupation Health & Safety Officer

Ella P. Isaacs

Dip. Occupation Health & Safety (UG)

Finance Division

Accountant

Peter Ramcharran

ACCA Level 1& 2

CAT

Assistant Accountant

Errol Chester

Dip Accounts (UG)

Marcelle Mc Rae

Dip. Accounts (UG)



Marketing Division

Marketing Assistant

Gloria Chester

B. Sc. Marketing (UG)

Dip. Marketing (UG)

Quality Control Division

Quality Control Manager

Allison Peters

B. Sc. Agriculture (UG)

Research Assistant

Marsha Hohenkirk

B. SC. Agri. (UG)

REGION 2

Regional Supervisor

Dhirendranath Singh

B.Sc. Agri. (UG)

Research Assistant

Devwattie Dass

B.Sc. Agronomy (Cuba)

Grading Officer

Ronsard Boodhram

Dip. Agri. (GSA)

Grading Officer

Kevin Joseph

Cert. Agri. (GSA)

Grading Officer

Kishan Indrawattie

Cert. Agri. (GSA)



REGION 3

Regional Co-ordinator

Charles Hope

B.Sc. Economics (UG)

Dip. Marketing, (UG)

Grading Officer

Donett Adams

Dip. Secretarial Science (GTI)

Grading Officer

Leelawatie Manohar

Dip. Agri. (GSA)

Grading Officer

Uancy Chichester

Di. Agri. (GSA)

REGION 4

Regional Co-ordinator

Colleen Bailey-Arjune

Cert. Agri. (GSA)

Cert. Supervisory Management, (IDCE)

Grading Officer

Shemeka Reece

Dip. Agri. (GSA)

Grading Officer

Trevonne Wright

Cert. Agri. (GSA)

Grading Officer

Paul A. Harry

Cert. Agri. (GSA)

Technical Assistant

Ezekiel Jacobs

REGION 5

Regional Co-ordinator

Errol Joseph

Cert. Agri (GSA)

Grading Officer

Beverley Joseph

Grading Officer

Eon Bacchus

Dip. Agri. (GSA)

REGION 6

Regional Supervisor

Visan Budraj

B.Sc. Agriculture (UG)

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Appendices

1. Rice Statistics 1968-2009
2. Harvesting (Production 2009)
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9. Paddy Price 2000 – 2009



Appendix 1

Year	Hectare	Paddy	Yield per Hectare	140 lbs	Rice Equiv	Quantity	Value
	Harvested	Production	Tonnes	(HA)	Tonnes	Exported(MT)	G\$ & US\$
1968	126,702	221,869	1.7	27.6	139,643	93,367	\$27,632.00
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	260,815.241	US 114,120,323.83

Appendix 2

PRODUCTION 2009										
HARVESTING										
REGION / ZONE	HECT- ARE				Paddy Pro- duction		Rice Equiv.	Yield	Yield	%
	Target	Pre- pared	Sown	Har- vested	Bags	M/T	M/T	(Bags/ Ha)	(Tons/ Ha)	Harvest- ed
REGION 2										
Essequibo	25,910	25,249	25,142	25,111	1,874,654	119,080	77,402	74.7	4.7	99.9
Sub-Total	25,910	25,249	25,142	25,111	1,874,654	119,080	77,402	74.7	4.7	99.9
REGION 3										
Wakenaam	2,430	1,822	1,709	1,685	96,264	6,115	3,975	57.1	3.6	98.6
Leguan	3,238	2,658	2,632	2,431	138,226	8,780	5,707	56.9	3.6	92.4
Hogg Island	244	101	101	101	6,000	381	248	59.3	3.8	100.0
West Demerara	11,336	11,320	11,268	11,236	849,296	53,948	35,066	75.6	4.8	99.7
Sub-Total	17,248	15,901	15,710	15,453	1,089,786	69,225	44,996	70.5	4.5	98.4
REGION 4										
Biaboo/Cane Grove	4,614	4,453	4,291	4,271	332,400	21,114	13,724	77.8	4.9	99.5
Golden Grove/ Mahaica	1,902	1,903	1,789	1,781	123,714	7,858	5,108	69.5	4.4	99.5
Sub-Total	6,516	6,356	6,081	6,052	456,114	28,973	18,832	75.4	4.8	99.5
REGION 5										
Mahaica/Mahai- cony	8,098	8,462	8,291	6,565	421,590	26,780	17,407	64.2	4.1	79.2
Mahaicony/Abary	16,194	15,142	13,854	12,632	854,160	54,257	35,267	67.6	4.3	91.2
West Berbice	32,388	24,680	23,174	21,182	1,447,980	91,977	59,785	68.4	4.3	91.4
Sub Total	56,680	48,283	45,320	40,379	2,723,730	173,014	112,459	67.5	4.3	89.1
REGION 6										
Frontlands	24,290	24,576	24,279	24,277	1,657,374	105,278	68,431	68.3	4.3	100.0
Black Bush Polder	13,766	13,569	13,549	13,548	912,350	57,953	37,670	67.3	4.3	100.0
Sub-Total	38,056	38,145	37,827	37,825	2,569,724	163,231	106,100	67.9	4.3	100.0
TOTAL	144,409	133,933	130,080	124,820	8,714,008	553,522	359,789	69.8	4.4	96.0





Appendix 3

SPRING CROP 2009										
HARVESTING										
REGION / ZONE	HECTARE				Paddy Production		Rice Equiv.	Yield	Yield	%
	Target	Prepared	Sown	Harvested	Bags	M/T	M/T	(Bags/Ha)	(Tons/Ha)	Harvested
REGION 2										
Essequibo	12,955	12,106	12,012	12,012	854,027	54,249	35,262	71.1	4.5	100.0
Sub-Total	12,955	12,106	12,012	12,012	854,027	54,249	35,262	71.1	4.5	100.0
REGION 3										
Wakenaam	1,215	1,012	962	951	56,400	3,583	2,329	59.3	3.8	99.0
Leguan	1,619	1,443	1,417	1,397	89,700	5,698	3,704	64.2	4.1	98.6
Hogg Island	122	101	101	101	6,000	381	248	59.3	3.8	100.0
West Demerara	5,668	5,668	5,636	5,623	443,392	28,165	18,307	78.8	5.0	99.8
Sub-Total	8,624	8,225	8,115	8,073	595,492	37,827	24,587	73.8	4.7	99.5
REGION 4										
Baiboo/Cane Grove	2,307	2,227	2,146	2,146	174,900	11,110	7,221	81.5	5.2	100.0
Golden Grove/Mahaica	951	951	838	836	53,664	3,409	2,216	64.2	4.1	99.7
Sub-Total	3,258	3,178	2,984	2,981	228,564	14,519	9,437	76.7	4.9	99.9
REGION 5										
Mahaica/Mahaicony	4,049	3,846	3,676	2,020	129,740	8,241	5,357	64.2	4.1	55.0
Mahaicony/Abary	8,097	6,437	5,150	3,935	252,720	16,053	10,434	64.2	4.1	76.4
West Berbice	16,194	9,757	8,794	6,874	458,460	29,122	18,929	66.7	4.2	78.2
Sub Total	28,340	20,040	17,619	12,830	840,920	53,416	34,720	65.5	4.2	72.8
REGION 6										
Frontlands	12,145	12,433	12,136	12,135	899,190	57,117	37,126	74.1	4.7	100.0
Black Bush Polder	6,883	6,694	6,674	6,674	478,036	30,365	19,737	71.6	4.6	100.0
Sub-Total	19,028	19,128	18,810	18,808	1,377,226	87,483	56,864	73.2	4.7	100.0
TOTAL	72,205	62,677	59,541	54,705	3,896,229	247,492	160,870	71.2	4.5	91.9

AUTUMN CROP 2009										
HARVESTING										
REGION / ZONE	HECT- ARE				Paddy Production		Rice Equiv.	Yield	Yield	%
	Target	Prepared	Sown	Harvested	Bags	M/T	M/T	(Bags/Ha)	(Tons/Ha)	Harvested
REGION 2										
Essequibo	12,955	13,142.51	13,129.55	13,098.78	1,020,627	64,831	42,140	77.9	4.9	99.8
Sub-Total	12,955	13,142.51	13,129.55	13,098.78	1,020,627	64,831	42,140	77.9	4.9	99.8
REGION 3										
Wakenaam	1,215	809.71	747.77	733.60	39,864	2,532	1,646	54.3	3.5	98.1
Leguan	1,619	1,214.57	1,214.57	1,034.00	48,526	3,082	2,004	46.9	3.0	85.1
Hogg Island	122	0.00	0.00	0.00	0	0	0	0.0	0.0	0.0
West Demerara	5,668	5,651.82	5,632.38	5,612.14	405,904	25,783	16,759	72.3	4.6	99.6
Sub-Total	8,624	7,676.10	7,594.72	7,379.74	494,294	31,398	20,409	67.0	4.3	97.2
REGION 4										
Baiboo/Cane Grove	2,307	2,226.72	2,145.74	2,125.50	157,500	10,005	6,503	74.1	4.7	99.1
Golden Grove/Mahaica	951	951.41	951.41	945.34	70,050	4,450	2,892	74.1	4.7	99.4
Sub-Total	3,258	3,178.13	3,097.15	3,070.84	227,550	14,454	9,395	74.1	4.7	99.2
REGION 5										
Mahaica/Mahaicony	4,049	4,615.38	4,615.38	4,544.53	291,850	18,539	12,050	64.2	4.1	98.5
Mahaicony/Abary	8,097	8,704.45	8,704.45	8,696.35	601,440	38,204	24,833	69.2	4.4	99.9
West Berbice	16,194	14,923.07	14,380.56	14,307.69	989,520	62,855	40,856	69.2	4.4	99.5
Sub Total	28,340	28,242.90	27,700.39	27,548.57	1,882,810	119,598	77,739	68.3	4.3	99.5
REGION 6										
Frontlands	12,145	12,142.51	12,142.51	12,142.51	758,184	48,161	31,304	62.4	4.0	100.0
Black Bush Polder	6,883	6,874.49	6,874.49	6,874.49	434,314	27,588	17,932	63.2	4.0	100.0
Sub-Total	19,028	19,017.00	19,017.00	19,017.00	1,192,498	75,749	49,237	62.7	4.0	100.0
TOTAL	72,204	71,256.64	70,538.81	70,114.93	4,817,779	306,030	198,919	68.7	4.4	99.4



Appendix 5

Appendix 5: COMPARISON OF EXPORTS AS PER PRODUCTS

(Metric Tonnes) 2002-2009

PRODUCT	2002	2003	2004	2005	2006	2007	2008	2009
Cargo Rice	112,654	113,765	120,207	97,868	117,180	128,764	89,915	113,027
Cargo Bkn	2,429	4,814	15,391	2,263	3,072	3,968	5,191	8,068
White Rice	37,034	41,006	59,260	41,789	42,308	60,537	46,771	64,405
C.P.B Rice	7,121	7,394	7,326	4,330	6,787	11,362	9,301	5,198
White Bkn	18,086	14,910	15,787	13,564	10,318	26,126	18,472	31,309
White Pkg Bkn	0	0	0	0	0	6	52	0
White Rice Fl.	0	0	0	0	0	16	0	0
C.P.B Bkn	1,366	1,771	1,256	427	775	2,126	119	1,275
P.B Bkn	684	814	2,037	2,232	1,363	2,098	2,483	2,601
P.B Pkg Rice	521	347	93	1,262	2,235	4,393	5,910	7,179
P.B Rice Fl	0	0	0	0	0	3	0	0
Pkg Wht Rice	1,654	975	458	147	198	255	323	462
Rej P.B. Rice	856	734	694	309	286	956	884	499
Pet Rice	288	190	153	584	558	1,309	950	403
Mixed Bkn	0	0	0	0	20	0	0	0
Chips	0	0	0	11	0	16	0	0
Bran	4,374	3,695	2,582	1,386	1,382	2,586	545	2,061
Husk	0	14	0	0	0	0	0	0
Paddy	0	1,083	3,701	0	36	0	36	5232
Dam. P.B	0	630	244	278	0	424	201	284
P.B Rice	6,194	8,290	13,415	15,708	17,805	24,488	15,017	18,408
Stockfeed	0	0	0	0	0	0	0	53
Dis Wht Rice	0	0	472	0	0	3	0	0
Dis P.B Rice	0	0	16	0	253	0	0	233
C.P.B PKG	0	0	0	0	0	0	21	27
P.B Pkg Bk	0	0	0	0	0	0	18	39
Dis Bkn Rice	0	0	0	0	0	0	0	52
Pet PKG Rice	0	0	0	0	0	0	24	0
TOTAL	193,261	200,432	243,092	182,158	204,576	269,436	196,233	260,815

Appendix 6

Appendix 6: EXPORT AS PER DESTINATION 2009		
DESTINATION	QUANTITY (MT)	TOTAL EXPORT PERCENTAGE
CARICOM:		
ANTIGUA	626	
BARBADOS	2,252	
DOMINICA	1,077	
GRENADA	2,013	
JAMAICA	55,934	
NEVIS	24	
ST. KITTS	489,518	
ST. LUCIA	1,013	
ST. VINCENT	2,071	
SURINAME	119	
TRINIDAD	22,866	
SUB TOTAL	88,485	33.93%
EUROPEAN UNION:		
BELGIUM	11,424	
ITALY	250	
GERMANY	472	
GUADELOUPE	2,864	
SPAIN	6,300	
SWEDEN	300	
HOLLAND	45,958	
MARTINIQUE	1,952	
POLAND	6,674	
PORTUGAL	54,678	
UNITED KINGDOM	5,118	
SUB TOTAL	135,991	52.14%
OCT:		
ARUBA	3,988	
SUB TOTAL	3,988	1.52%
OTHERS:		
COLOMBIA	1064	
ANGUILLA	2	
TURKEY	1003	
U.S.A.	23	
VENEZUELA	4,104	
GUATEMALA	484	
HAITI	24,881	
PANAMA	790	
SUB TOTAL	32,351	12.41%
TOTAL	260,815	100%



Appendix 7

Appendix 7:EXPORTS ACCORDING TO PRODUCT - 2009

PRODUCT	QUANTITY (MT)	% OF TOTAL EXPORTS
BRAN	2,061	0.8
C.P.B BKN	1,275	0.5
C.P.B PKG	27	0.0
C.P.B RICE	5,198	2.0
CARGO BKN	8,068	3.1
CARGO RICE	113,027	43.3
DAMAGE RICE	284	0.1
P.B PKG BK	39	0.0
P.B PKG RICE	7,179	2.8
PADDY	5,232	2.0
STOCKFEED	53	0.0
PARB BKN	2,601	1.0
PARB RICE	18,408	7.0
PET RICE	403	0.2
REJ. P.B. RICE	499	0.2
WHT BKN	31,309	12.0
DIS BKN RICE	52	0.0
DIS POL RICE	233	0.1
WHT PKG RICE	462	0.2
WHT RICE	64,405	24.7
TOTAL	260,815	100%



Appendix 8

Appendix 8: AVERAGE EXPORT PRICES 2002-2009								
REGION	2002	2003	2004	2005	2006	2007	2008	2009
EUROPEAN UNION								
CARGO PB BKN	-	-	100	110	110	110	-	-
PARB. BKN	100	100	100	110	110	110	295	207
REJ. PB RICE	110	-	-	-	-	158	-	-
CARGO RICE	215	206	218	240	260	262	600	409
CARGO BKN	130	100	118	-	142	148	265	250
WHITE RICE	-	-	-	-	-	320	530	447
WHITE BKN	155	143	143	160	160	168	425	241
C.P.B RICE	235	240	240	244	306	261	480	440
PARB. RICE	-	-	-	-	-	400	-	550
CARICOM								
CARGO RICE	-	-	217	364	260	283	623	443
CARGO BKN	120	100	-	105	110	-	295	210
WHITE RICE	270	260	275	275	295	347	688	532
WHITE PKG. RICE	-	-	-	352	390	594	763	512
WHITE BKN	-	140	140	180	175	178	426	316
C.P.B RICE	234	240	240	290	310	285	945	608
C.P.B. BKN	100	100	100	104	120	110	190	295
PARB RICE	392	370	390	399	400	425	824	716
PARB PKG. RICE	-	-	-	468	475	638	851	756
PARB BKN	138	100	130	162	165	164	354	253
REJ . PB RICE	110	110	153	170	178	195	-	294
BRAN	50	45	40	62	63	45	118	96
PET RICE	-	-	-	-	-	190	-	250
OCT								
CARGO RICE	207	206	218	242	260	260	557	375
CARGO BKN	116	100	118	121	110	145	355	187
WHITE RICE	331	-	245	245	300	-	-	-
WHITE BKN	145	140	143	150	160	161	-	-
C.P.B RICE	240	-	-	-	-	-	-	185
C.P.B BKN	-	-	100	104	-	-	-	-
OTHERS								
CARGO BKN	-	-	127	-	110	-	-	-
WHITE RICE	-	260	245	273	295	308	703	510
WHITE BKN	-	155	150	174	160	166	435	276
PARB. RICE	-	-	-	-	-	373	-	590
PADDY	-	-	131	-	-	-	-	348
PET RICE	-	-	40	-	-	194	600	-
CHIPS	-	-	-	-	-	190	-	-
CARGO RICE	-	-	226	233	265	280	510	400
PARB PKG RICE	-	-	-	-	-	462	-	681
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





Appendix 9: Paddy Price 2000 - 2009

Year	First Crop					Second Crop				
	Extra A	A	B	C	Substandard	Extra A	A	B	C	Substandard
2000	1,300	1,250	1,200	1,150	900/1000	1,300	1,250	1,200	1,150	900/100
2001	1,300	1,200	1,100	1,000	600/900	1,300	1,200	1,100	1,000	900
2002	1,400	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	1,100	900	1,400	1,350	1,350	1,350	600/100
2004	1,400	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	1,000	-	1,700	1,700	1,700	1,000
2006	2,000	1,800	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	1,700	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	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	2,000	2,200-2,500	2,200-2,500	2,200-2,500	2,200-2,500	1,200