

Guyana Rice Development Board

Annual Report 2008

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General Manager's Statement.



*Mr Jagnarne Singh
General Manager*

2008 can be considered as one of the better years for the rice sector in the last decade. During this year we saw the highest prices being paid for rice and thus in some cases the stakeholders were once again making some profits. This year was also celebrated as Guyana's 100th year as a significant exporter of rice. World Rice Trade only account for 2-3 % of the total world production, but Guyana stands in a unique position where we export in excess of 65% of the rice produced. Our celebration for this occasion was concluded with an International Rice Conference, with the theme "Meeting Rice Market demands".

For this conference specialists from the various areas of rice production, International Universities, producing companies, equipment suppliers, specialist in Guyana etc. deliver very important presentations. His Excellency President Jagdeo, gave the feature address at the opening of the conference. Jamaica's Minister of Investment Industry and Commerce Karl Samuda attended the opening of the conference and reaffirm his country's commitment in rice trade with Guyana.

The year was very challenging in the area of marketing. The year commenced with very little carry over stock, but by the start of the first crop we would have seen international prices reaching an all time high. This was as a result of very low carry over and reserve stocks for some of the major exporters. Also with some government intervention by some of the world's major exporting nations, by May the prices were even higher than before. Guyana benefitted as would be seen in the marketing report, despite the reduced exports. Our export earnings from rice were the highest ever.

In the area of finance GRDB's earnings were in excess of the budget, but similarly the expenditure was in excess of the budget. The increased revenue was as a result of an increase in the commission charged and increases in the price for seed sold at the Research station. The increased Expenditure was expected as we experienced some of the largest increases in the price for fuel and fertilizers. Research continued to be the area where we spent a larger share of our budget.

GRDB Rice Research Station continued to do extensive research work in the production of new varieties of padi that are high yielding and pest and disease resistant. The research staff continued to increase our "on-farm" research work during 2008. This has resulted in the improvement of the technical capacity of farmers while enhancing the new technologies developed at the BRRS and other partnering research facilities.

Trials were conducted to develop new disease resistant varieties; two new varieties would be released in the second crop of 2009. These varieties are now being tested in semi-commercial plots in farmers' fields. Sixteen basic seed plots, six Advance Yield Trials, eight fertilizers trials and thirteen on Farm testing of the new lines were done in farmers' fields. During the year, the Plant Breeding Department screened 500 introduced advanced breeding lines from the FLAR (Latin American Fund for Irrigated Rice) program and 20 of these were tested in farmers' fields.

The Plant Protection Department screened and tested all new pesticides that were introduced in Guyana for the rice industry this was to ensure that it is "safe" to be used in rice production and trade. Seed production by GRDB in 2008 was 19,086 bags.

During 2008 we witnessed a smaller than expected second crop and this was due to extreme weather in the latter stage of harvesting. This again was another example of the negative impact of extreme weather on the rice industry.

In the area of international trade, we saw the commencement of a process that will lead to free trade with the European Union. The Economic Partnership Agreement (EPA) between the Cariforum Countries and the European Union came into effect and for a period of two years, leading up to full duty-free and quota-free access, by year 2010. CARIFORUM rice exporting countries were given quotas of 187,000 tons for 2008 and 250,000 tons for 2009. The quotas are duty-free.

The experience in 2008 that led to the increase in rice prices showed that Guyana stands in a very unique food security position; as a matter of fact we are a relative exporter of rice and other food products.

In 2009 GRDB will continue to work with farmers, millers and other stakeholders in developing the industry. One of the most difficult areas was the payment to farmers by some millers. In 2009 we will review this situation and be prepared to make the necessary legal and other changes to ensure that timely payments are done.



Administrative Department

Organizational Structure:

For the year January 01 - December 31, 2008, the following persons were appointed to the Board of Directors: namely:-

LIST OF DIRECTORS FOR THE PERIOD

NAMES	DESIGNATION
Dr. Dindyal Permaul	Chairman
Mr. Dharamkumar Seeraj	Vice Chairman
Dr. Peter DeGroot	Director
Mr. Jagnarine Singh	Director
Ms. Rajdai Jagarnauth	Director
Mr. Leekha Rambrich	Director
Mr. Pariag Sukhai	Director
Ms. Eileen Cox	Director
Mr. Ramsahai Ramnarain	Director
Ms. Savitri Sukhai	Director
Ms. Shirley Edwards	Director
Mr. Mohamed Sattuar	Director
Mr. Kuldip Ragnauth- From January- September 30, 2008, Ms. Malissa Basdeo - From September- December 31, 2008.	Secretary

There were twelve (12) statutory meetings of the above Board of Directors.

Section 8 (1) of the Act provide 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 & ADMINISTRATION SUB-COMMITTEE
- b. MARKETING & QUALITY CONTROL
- c. RESEARCH & EXTENSION
- d. PROCUREMENT SUB-COMMITTEE.



Members of the various Sub-Committees are as follows:

LIST OF FINANCE & ADMINISTRATION SUB-COMMITTEE MEMBERS

NAMES	DESIGNATION
Dr. P. DeGroot	Chairman
Mr. Jagnarine Singh	Member
Mr. Dharamkumar Seeraj	Member
Mrs. Elaine Reid	Member
Mr. P. Sukhai	Member
Mr. Leeka Rambrich	Member
Mr. Mohamed Sattuar	Member
Ms. Shirley Edwards	Member
Dr. D. Permaul	Permanent Secretary
Mr. Alvin Rambajan	Member
Mr. George Jervis	Secretary

There were nine (9) meetings of the F & A Sub-Committee.

LIST OF MARKETING & QUALITY CONTROL SUB-COMMITTEE MEMBERS

NAMES	DESIGNATION
Mr. Dharamkumar Seeraj	Chairman
Mr. Jagnarine Singh	Member
Mr. Osmond Davy	Member
Mr. Mohamed Ali	Member
Ms. Rajdai Jagarnauth	Member
Ms. Savitri Sukhai	Member
Mr. Pedro Castello	Member
Mr. Robert Badal- Up to the 30 th Sept. 2008.	Member
Ms. Allison Peters	Secretary

There were nine (9) meetings of the Marketing and Quality Control Sub-Committee.



LIST OF RESEARCH AND EXTENSION SUB-COMMITTEE MEMBERS

NAME	DESIGNATION
Dr. D. Permaul	Chairman
Mr. Jagnarine Singh	Member
Mr. Ricky Ropchand	Member
Mr. Ramsahai Ramnarain	Member
Mr. Leroy Small	Member
Mr. Bindraban Bisnauth	Invitee
Mr. Leekha Rambrich	Member
Mr. Pariag Sukhai	Member
Dr. Mahendra Persaud	Member
Mr. Kuldip Ragnauth	Secretary

There were eleven (11) meetings of the Research & Extension Sub-Committee

**List of Procurement Sub- Committee Members
January 01-December 31, 2008**

Name	Designation
Dr. Dindyal Permaul	Chairman
Savitri Sukhai	Member
Ms. Rajdai Jagarnauth	Member
Dr. Peter DeGroot	Member
Shirley Edwards	Member
Mr. Dharamkumar Seeraj	Member
Mr. Mohammed Sattuar	Member
Mr. Jagnarine Singh	Invitee
Mr. Kuldip Ragnauth	Secretary

There were nine (9) meetings of the Procurement sub- committee.

Organisational Structure

There have been no changes or addition to the structure which remain as follows:-

1. Finance
2. Administration
3. Marketing
4. Quality Control
5. Research, and
6. Extension

Management Committee

The committee met as required, and for 2008 there were six (6) meetings of this committee.

List of Management Committee Members

NAME	DESIGNATION
Mr. Jagnarine Singh (General Manager)	Member
Mr. George Jervis (Administrative Manager)	Member
Ms. Allison Peters (Quality Control Manager (ag))	Member
Mr. Kuldip Ragnauth (Extension Manager)	Member
Mrs. Elaine Reid (Accountant)	Member
Mr. Leroy Small (Chief Scientist)	Member
Mr. L. Bissoon (Farm Manager)	Member
Mrs. E. P. Isaacs (Occupational Health & Safety Officer)	Member
Dr. Mahendra Persaud (Plant Breeder)	Member

Staff Complement

One hundred and eight-six (186) employees comprised the staff strength of Guyana Rice Development Board, they are being supervised by their respective Departmental Heads.

Staff- Appointments

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

Head Office

- | | | |
|-------------------|---|---------------------------------------|
| (Operations) | - | Mr. Vivek Joshi
Operations Manager |
| (Quality Control) | - | Mr. Rodwell Johnson |



		Laboratory Attendant
	-	Mr. Trevonne Wright Grading Officer
	-	Mr. Paul Harry Grading Officer
	-	Jamal Harris Laboratory Attendant
(Marketing)	-	Mr. Kenny Ramrattan Marketing Assistant
(Audit)	-	Ms. Malissa Basdeo Internal Auditor
(Accounts)	-	Ms. Deomattie Seeram Administrative Assistant
Rice Research Station (Extension)	-	Mr. Quacie Wilson District Rice Extension Officer
	-	Mr. Delon McKenzie District Rice Extension Officer
(Admin/Accounts)	-	Mr. Dhanpaul Samaroo Driver
	-	Ms. Marai Ritney Accounts Clerk
	-	Ms. Deokie Ramdeen Accounts Clerk
	-	Ms. Tulsidai Ramnaraine Typist/Clerk
	-	Ms. Chandrawtie Sukhdeo Typist Clerk
	-	Mr. Dharamdeo Singh Trainee Research Technician
	-	Ms. Mahadai Motielall Research Assistant



- Mr. Persaram Ramdat
Research Assistant
- Mr. Colin Watson
Research Assistant
- Ms. Sarjudei Balkarran
Typist/Clerk
- (Quality Control)
 - Ms. Shabana Khan
Grading Officer
 - Ms. Jasmine Jacobs
Lab. Assistant/Research Technician
- Crane Branch Office
(Extension)
 - Mr. Eon Bacchus
Grading Officer
- Anna Regina
(Extension)
 - Mr. Adrian Hansraj
District Rice Extension Officer
- (Quality Control)
 - Mr. Subodh Kishore
District Rice Extension Officer
- (Quality Control)
 - Mr. Delon McDonald
Grading Officer
 - Mr. Ronsard Boodhram
Grading Officer
- Corriverton Branch Office
(Extension)
 - Mr. Surrinaraine Perumal
District Rice Extension Officer
 - Mr. Alvin Samaroo
Field Officer
 - Mr. Permeshwar Ramcharitar
Field Officer
- (Quality Control)
 - Ms. Arleen Munroe
Grading Officer
 - Mr. Lubert Walcott
Grading 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.

Training and Development

There were several training sessions conducted during the year. These involved staff from the several departments of the Board.

Apart from the above, two (2) Cuban trained, Guyanese Agronomists were seconded to the Burma Rice Research Station.

Shanna Crawford, Eon Wordsworth and Gloria Chester completed Bachelors' Degrees in Agriculture, Banking and Finance and Management respectively, at the University of Guyana. GRDB wishes to congratulate these staff and hopes that other members of staff will further their education as well.

Occupational Health & Safety

Guyana Rice Development Board in its bid to promote and maintain a safe and healthy working environment and aid in the national response to HIV/AIDS embraced the fact that HIV/AIDS is a workplace issue and pledges its support to reduce the spread of the infection.

Under the Government of Guyana World Bank HIV/AIDS Prevention and Control Project GRDB had increased its activities as it relates to HIV/AIDS through training, education and behaviour change communication, condom distribution, information dissemination and policy formulation. For the preceeding year there were a number of training sessions with farmers, employees and their relatives.

The GRDB received awards from The Guyana Business Coalition on HIV/AIDS in collaboration with U S A I D /G H A R P and the Ministry of Health. The award ceremony was held on May 29th 2008. The Board received the top awards for Business Excellence on HIV/AIDS using its core competency and Individual leadership.

The Board targeted its employees, external clients and their communities. These training sessions were well received.

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 CLICO.

Contributory Pension & Annuity Schemes

The Demerara Mutual Life Assurance Society Ltd, has underwritten these schemes. It is compulsory and is contributed to by both the employees and the Board. These contributions are at the rate of 5% from the employees and 7% from the Board.

Union Recognition

There are two Unions recognised by the Board, namely:-

- General Worker's Union (GWU) which represents staff at Head Office and the four Regional Offices; and
- Union of Agricultural 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.

Staff Welfare, Sports, Etc.

Female members of staff, Drivers, Laboratory Assistants, Office Assistants and Office Attendants were provided with uniforms.

GRDB was well represented and took Trophies at the Ministry of Agriculture Awards Ceremony and Fun day which was held at Thirst Park on October 24th, 2008.





Finance Report

DETAILS IN REVENUE EARNED

	ACTUALS			Y.T.D. 08	
	2005	2006	2007	ACTUAL	BUDGET
Sale Commissions	200,736	229,066	297,818	279,629	267,215
Seed Padi Sales	40,809	55,652	48,311	119,116	62,000
Income from Investment	277	301	201	196	1,000
Licences - Mill	3,615	2,905	3,334	6,415	4,000
- Export	725	900	575	3,625	500
Grading & Inspection	556	613	412	396	900
Wharfage & Moorage	2,051	3,043	2,758	1,168	1,500
Gain on Exchange	142	148	35	53	100
Miscellaneous	1,691	2,611	8,387	13,285	4,000
Cleaning of Seed Padi	107	-	-	-	300
By Products	629	348	476	947	800
ASSP	-	3929	5,545	-	8,000
TOTAL	251,338	299,516	367,852	424,830	350,315

Revenue for the period under review exceed budget G74.5m. There was 5% increase in Sales Commission, coupled with over 50% increase in Seed Paddy Sales.

CURRENT EXPENDITURE

Current Expenditure for the period under review was G\$86m or 26.8% above Budget. This is due to spiraling Fuel prices which had an effect on price on Fertilizer.

CAPITAL EXPENDITURE

Capital Expenditure incurred for the period was G\$9,889,000. The details are as follows:

	DIVISION						Y.T.D.	
	Audit	Finance	Admin	Grading	Research	Comm.	Ext.	Total
Plant & Mach.	-	-	-	215	383	80	-	678
Furniture & Equip.	475	619	561	607	1,211	52	192	3,717
Motor Vehicle	-	-	-	-	-	-	5,494	5,494
TOTAL	475	619	561	822	1,594	132	5,686	9,889

G. LIQUIDITY

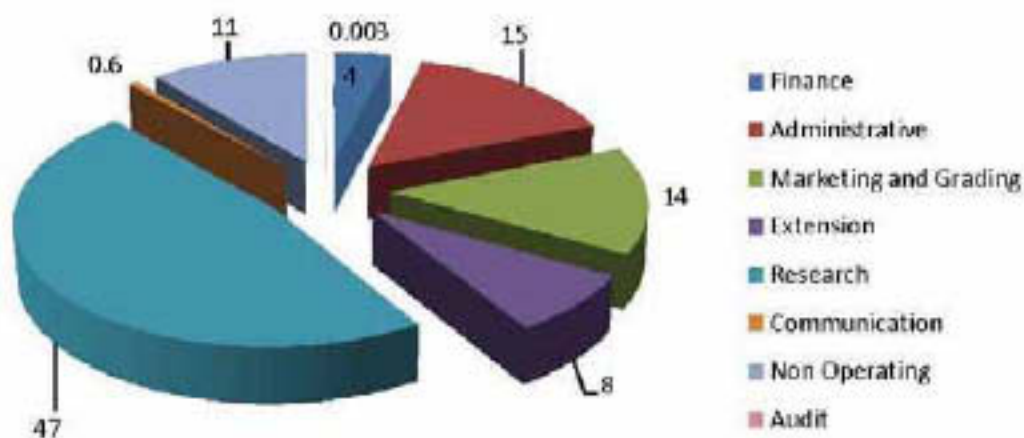
- i. Cash in hand and at Bank G\$35,753.
- ii. No Bank borrowings
- iii. No Bank overdraft

STOCK & STORES (ACTUAL STOCK COUNT 31/12/08)
(G\$000)

PARTICULARS	Head Office	RRS	Grand Total
Stationery & O/S	1,669	450	2,119
Misc. Stores	659	3,211	3,870
Chem./Fert./Fug.	-	10,555	10,555
Fuel & Lubricant	-	338	338
TOTAL	2,328	14,554	16,882

DIVISIONAL EXPENDITURE

DIVISION	G\$'000	%
Finance	17,790	4
Administrative	57,794	15
Marketing and Grading	57,123	14
Extension	32,540	8
Research	186,393	47
Communication	2,389	0.6
Non Operating	42,586	11
Audit	1,350	0.003
TOTAL	397,965	100

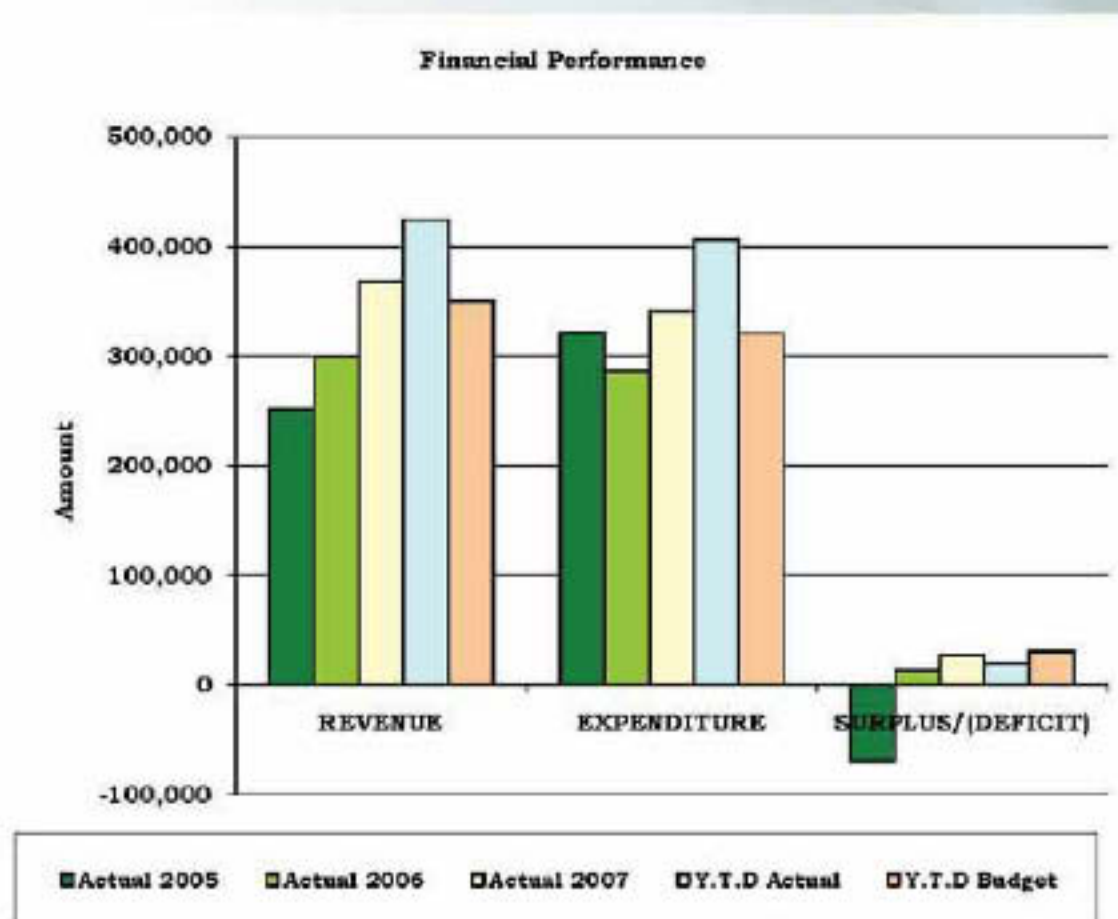


FINANCIAL PERFORMANCE

In 2008 GRDB experienced a good financial year, there was an increase in revenue and by the same token there was an increase in expenditure. The latter was largely due to the increase in fuel and fertilizer prices two commodities that are vitally important to the existence of the Rich Research station. There was also an operation surplus of 61% and there was an increase in revenue by 21.3% as against what was budgeted for.

(G\$'000)

PARTICULARS	ACTUAL			Y.T.D.	
	2005	2006	2007	Actual	Budget
REVENUE	251,338	299,664	367,852	424,830	350,315
EXPENDITURE	320,891	285,936	340,958	406,365	320,323
SURPLUS/(DEFICIT)	-69,553	13,728	26,894	18,465	29,992



Research Highlights for 2007

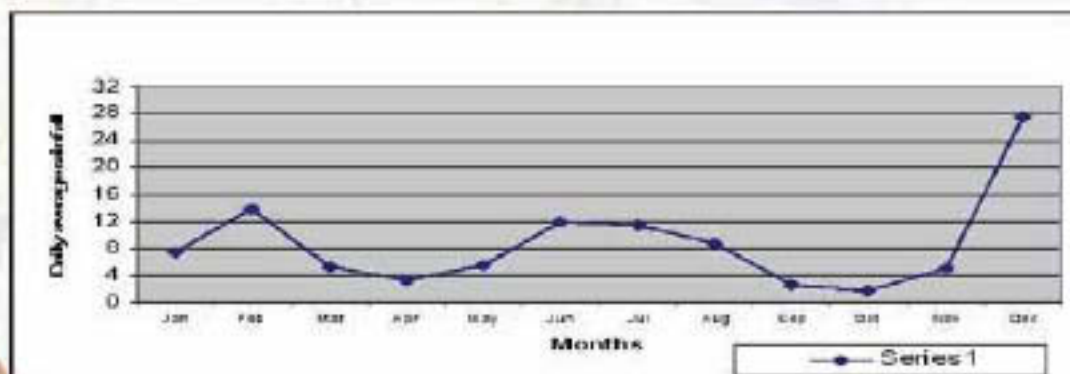
1.0 RAINFALL:

Moderately wet to very wet conditions prevailed during the months of January, February, June, July, August and December, with the month of December recording the highest monthly rainfall of 853.4 mm in the Mahaicony Area for the past 35 years. This unusual volume of precipitation severely affected experimental plots as well as commercial fields sown during the month of December. The drier months of the year April, September and October permitted the activities normally scheduled during those months – harvesting, drying, primary land preparation – to be accomplished. The accumulated rainfall for the year – 3194.4 mm was also highest Annual Rainfall recorded for the Mahaicony Area for the past 35 years. A summary of the average daily rainfall on a monthly basis and the total rainfall for each month for the Burma location is given below:-

Table 1 - Rainfall for 2008

Month	Rainfall (mm)	
	Daily Average	Monthly Total
January	7.50	232.5
February	13.97	405.2
March	5.34	165.5
April	3.23	96.9
May	5.49	170.3
June	11.81	354.4
July	11.58	359.0
August	8.93	276.7
September	2.58	77.3
October	1.66	51.6
November	5.05	151.6
December	27.53	853.4
Avg. / Total	8.73	3194.4

Fig. 1 - Graph showing daily average rainfall for 2008



2.0 SUNSHINE:

Data from the Burma Meteorological Station representing the incidence of sunshine for 2008 indicated that the most favorable month was August with 295.5 hours of sunshine at an average of 9.53 hours per day. Other months with average daily sunshine hours greater than 7.0 were September – 8.04, October – 8.04, November – 7.68, July – 7.34 and March – 7.10; however October values were based on 17 days of sunshine recordings while those for July were based on 28 days of sunshine recordings.

In general the incidence of sunshine was better in the second half of the year than in the first half. A summary of average sunshine hours on a monthly basis and the total sunshine hours for each month for the Burma location is given below:-

Table 2: Sunshine for 2008

Month	Sunshine (hrs)		Comments
	Daily Avg.	Monthly Total	
January	6.4	198.7	
February	4.9	142.3	
March	7.1	220.2	
April	6.93	207.9	
May	6.06	187.9	
June	6.31	189.2	
July	7.34	205.4	Readings for 28 days
August	9.53	295.5	
September	8.04	233.3	
October	8.04	136.6	Readings for 17 days (15-31st)
November	7.68	230.5	
December	3.64	112.7	
Avg. Total	6.76	2360.2	

Fig 2:- Graph showing daily average sunshine hours for 2008.



3.0 PLANT BREEDING

Focus of the Breeding Program

- 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

3.1 On Farm Trials (OFT)

The two new strains viz. G04-08 and FG05-259 were tested on ten farmers' field on 0.4047 m² plot size (one acre) in regions # 2, 3, 4, 5, and 6 during the autumn 2008 season. The performance of these lines were consistently superior to the local check variety. The mean performance of strain G04-08 and FG05-259 was 6.0 t/ha and 7.0 t/ha respectively with the check yielding 5.6 t/ha. Strain G04-08, FG05-259 and G98-22-4 yielded 7.5, 8.5 and 6.0 t/ha respectively at OFT at Cane Grove. This is a good indication of the yield potential of the new strains. Further confirmation of their superior performances is needed during the first crop of the 2009 season before releasing for commercial cultivation.

3.2 Advanced Yield Trials (AYT)

Eleven promising early duration (110 days) strains were tested along with three checks (G98-30-3, G98-135, G98-196) in a Randomize Block Design with three replications. Testing was done at four locations viz. Rice Research Station, Black Bush Polder, West Demerara and Spring Gardens over two seasons (spring and autumn 2008). Six strains (FG06-98, G06-8, FG06-33, FG06-36, FG06-84, and FG06-95) were promoted for further testing in the Spring 2009 season.

Another twelve strains of medium duration (110 days) along with three checks were analyzed. The experiment was laid out in a RBD with three replications at the same four locations. Five strains (FG06-155, FG06-123, FG06-159, G07-7, and G07-8) proved superior to other strains from this trial and were promoted for further testing in the next season.

3.3 Observational Yield Trial (OYT)

Preliminary assessments of new materials are being observed for yield potential and other desirable traits. Forty strains along with three checks were studied in an augmented design

over two seasons. Ten strains from this trial were promoted to the Advanced Yield Trials for testing during spring 2009 season.

3.4 Breeding Material

Eighty eight F₂ populations and 524 progenies (F₃ to F₈ generation) were studied in pedigree nurseries in spring 2008. During autumn 2008 a total of 4,732 progenies and 54 F₂ populations were studied. The number of progenies grown in various generations and selections taken over the two seasons are given in Table 3. Strains that were bulked were promoted for initial yield testing in the subsequent season OYT.

S.N.	Gen.	Spring, 2008				Autumn, 2008			
		No. of Crosses	No. of Progenies	No. Selections	Bulks	No. of Crosses	No. of Progenies	No. Selections	Bulks
1.	F ₂	88	(3-5000 plants/cross)	4380	-	54	(3-5000 plants/cross)	1175	-
2.	F ₃	-	-	-	-	88	4380	3090	-
3.	F ₄	04	0208	0109	-	-	-	-	-
4.	F ₅	04	0014	0021	-	04	0109	0039	-
5.	F ₆	-	-	-	-	04	0021	0025	-
6.	F ₇	31	0226	0192	-	-	-	-	-
7.	F ₈	-	-	-	-	29	0192	0080	21
8.	F ₉	-	-	-	-	-	-	-	-
9.	F ₁₀	10	0042	-	5	-	-	-	-
10.	other (FLAR)	14	0034	0030	-	14	0030	0021	01
	Total	151	524	4,732	5	193	4,732	4,430	22

Table 3: Breeding material grown and selections taken, during 2008.

3.5 Creating Variability and Raising F₁ Generation.

Seventy eight crosses were made during 2008 (45 in spring and 33 in autumn). Hybridization focused on creating variability for increasing yield potential, salt tolerance and aroma. Fifty four F₁ populations of crosses made in autumn 2007 were successfully raised in the spring 2008 season. Attempts to grow the F₁ populations of crosses made during the first season in the second season of 2008 were futile, due to complete devastation by rats. F₁ populations of the 78 crosses made in 2008 will be raised during spring 2009.



3.6 Characterization of Commercial Varieties

The 10 commercial varieties were studied to document the important trait of each variety in both seasons of 2008. The characters of each variety will be detailed in the department's technical report.

3.7 Germplasm Management

Six hundred and eighteen accessions were rejuvenated in the first season of 2008. Three hundred and forty three entries were received from FLAR during the latter part of the autumn crop. These will be grown for observation in spring of 2009. Another nine strains were received from ADRON, Surinam. These were observed in the autumn crop of 2008.

3.8 Strain Purification

One hundred and one strains were purified during the autumn 2008 season. These lines were grown in progeny 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.

3.9 Maintenance Breeding and Seed Production

3.9.1 Breeder Stock / Nucleus Seed Production

S.N.	Varieties	Spring 2008		Autumn 2008		Total	
		Progenies Grown	Selections Taken	Progenies Grown	Selections Taken	Progenies Grown	Selections Taken
1.	Rustic	25	600	25	300	25	900
2.	Diwani	25	250	25	200	25	450
3.	F7-10	25	260	25	200	25	460
4.	BR 240	25	60	25	50	25	110
5.	BR 444	25	300	25	250	25	750
6.	G98-22-4	25	600	25	250	25	850
7.	G98-24-1	25	50	25	50	25	100
8.	G98-30-3	25	600	25	300	25	900
9.	G98-135	25	1200	25	525	25	1725
10.	G98-196	25	1000	25	475	25	1475
10.	G 04-08	25	300	25	350	25	650
11.	FG 05-298	25	300	25	350	25	650
	Total	300	5,720	250	2,600	250	8,320

3.9.2 Prebasic Production

S.N.	Varieties	Spring ,2008		Autumn,200		Total	
		Progenies Grown	Seed Yield (kg)	Progenies Grown	Seed Yield (kg)	Progenies Grown	Seed Yield (kg)
1.	Rustic	300	254.5	300	259.1	600	513.6
2.	Diwani	225	95.5	100	127.3	325	222.7
3.	F7-10	225	127.3	100	127.3	325	254.5
4.	BR 444	225	63.6	160	127.3	385	190.9
5.	G98-22-4	225	190.9	225	254.5	450	445.5
6.	G98-30-3	225	143.2	275	318.2	500	461.4
7.	G98-135	450	143.2	525	509.1	975	652.3
8.	G98-196	375	79.5	430	413.6	805	493.2
9.	G04-08	150	95.5	275	381.8	425	477.3
10.	FG 05-259	150	95.5	275	318.2	425	413.6
11.	FG 05-298	150	79.5	100	63.6	250	143.2
	Total	2, 650.	1368.2	2765	2900.0	5465	4268.2

3.9.3 Basic Seed Production at RRS

S.N.	Varieties	Spring 2008		Autumn 2008		Total	
		Area	Seed Produced	Area	Seed Produced	Area	Seed
		Hectares	Tonnes	Hectares	Tonnes	Hectare	Tonnes
1.	Rustic	1.4	4.6	1.4	3.4	2.8	8.0
2.	G98-22-4	1.0	2.7	1.0	2.0	2.0	4.6
3.	G98-196	2.3	8.4	2.3	2.0	4.6	10.4
4.	G98-30	1.1	3.1	1.1	1.7	2.3	4.7
5.	G98-135	1.6	5.2	1.6	2.0	3.2	7.2
6.	G04-08	0.0	0.0	1.0	3.1	1.0	3.1
7.	FG05-259	0.0	0.0	0.7	2.4	0.7	2.4
	Total	7.5	23.9	9.2	16.5	16.7	40.4



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3.9.4 Seed Production- Off Station

S.N.	Farmer	Region	Variety	Acreage	Spring 2008	Autumn 2008	Total Seed
					Yield	Yield	
					Tonnes	Tonnes	Tonnes
1	Yhadonauth Madhoo	Reg # 2	G98-22-4	03	9.0	9.0	18
2	Gobin Narine	Reg # 2	Rustic	02	5.0	5.4	10.4
3	Buneshwar Singh	Reg # 3	G98-135	02	3.6	0.0	3.6
4	B.M.Khan	Reg # 3	G98-196	02	3.3	0.0	3.3
5	R. Paidana	Reg # 6	G98-196	1.5	1.8	1.9	3.7
6	Rashid Ally	Reg # 6	G98-135	01	2.9	0.0	2.9
7	Denish Petamber	Reg # 6	G98-135	03	0.0	6.4	6.4
8	Sub station	Reg # 6	G98-196	1.2	4.6	2.7	7.3
	Total	3	5	15.7	30.2	25.4	55.6

4.0 Agronomy (Soil Fertility)

During the year 2008, the Agronomy (Soil Fertility) Department was involved in a number of activities to achieve its objectives. The main activities were conducting field trials to evaluate responses of some of the cultivated rice varieties to nitrogen, growth stimulants, and phosphorus sources and evaluating the six points practice. The department was also involved in the testing of irrigation water for total soluble salts and advising on the use of such water. Soil samples were also taken, prepared and sent for analysis at the National Agricultural Research Institute. Following are summaries of the field trials.

4.1 Balanced Nutrition Trials

Trials to demonstrate the benefits of balanced nutrition trials were conducted in regions 3, 5 and 6 with the objective of observing the benefits of balanced nutrition in commercial rice cultivation.

These trials were conducted in collaboration with Agro Services International Inc. of the U.S.A. and Geddes Grant Guyana Ltd. Trials were established in farmers fields in regions 3 and 6 and at the Rice Research station in region 5. The varieties used were chosen by the farmers and yield results indicated that yields are indeed improved with balanced nutrition. In all cases the yields using MAP or DAP were greater than the normal practice. Results are presented in table 1.

Yield of paddy for Balanced nutrition Trials (t/ha).

Treatment	Spring 2008			Autumn 08	
	Reg. 3	Reg. 5	Reg. 6	Reg. 5 (a)	Reg. 5(b)
Normal	7.0	4.7	3.8	3.6	1.4
MAP	8.0	5.9	6.2	4.1	1.9
DAP	7.3	5.0	5.2	4.1	2.1

4.2 Variety by Nitrogen Trials

Experiments to determine the optimal level of four of the commercial varieties (G98-22-4, 30-3, 135 and 196) were conducted at the Research station on Litchfield clay. Trials were established as factorial trials with five nitrogen levels ranging from 0 to 200 Kg N/ha. From data recorded all varieties showed positive responses to added nitrogen. During the first season yields ranged from 3.0 to 6.5 t/ha and were statistically different ($p = 0.01$). In the second season three promising lines were tested along with G98-135 and again yields increased with added nitrogen. Yields ranged from 4.0 to 7.0 t/ha at the highest level of nitrogen.

4.3 Foliar Application of Bio Algeen- S 90

On trial was conducted during the first season of 2008 to evaluate the effect of applied bio algeen S90 on the yield of lowland rice. This trial was established at the Research Station on Litchfield clay as a Randomized Complete Block with four blocks, using variety G98-135. Yields ranged from 4.5 to 5.3 t/ha. Normal fertilizer practice yielded 5.0 t/ha while the normal fertilizer practice plus 2.25 L/ha of the product yielded 5.3 t/ha.

4.4 Foliar Application of Bio-Nature

One trial was established to evaluate the effect of Bio Nature on the yield of lowland rice was conducted at the Research station using variety G98-135. The trial was established as a Randomized Complete Block with four blocks and nine treatments. Yields ranged from 4.5 to 5.12 t/ha. Zero bio nature yielded 4.8 t/ha and the highest level of bio nature yielded 5.12 t/ha.

4.5 Evaluating the efficiency of Mono-ammonium Phosphate, Di-ammonium phosphate and Triple Superphosphate as phosphorus sources in lowland rice cultivation.

These trials were established as randomized complete block with four blocks and Phosphorus levels ranging from 0 to 90 kg P₂O₅ in increments of 30 kg from the three sources of phosphorus. During the first season yields ranged from 4.37 to 5.32 t/ha when 30 kg P₂O₅ was applied as TSP in the first season and from 3.55 to 4.82 when 90 kg P₂O₅ was applied as MAP. during the second season.

4.6 Demonstration trial on Six Strategic Points Practice.

A trial to evaluate the benefits of the six strategic points in better rice cultivation management was established at the Research Station. Included in the six points is time of planting, Seeding rate, treatment of seeds, Weed control, and Fertilization and water management. Nitrogen rate of 200 kg N/ha applied once was compared to the normal three split applications at 75 kg N/ha. Yields were 4.1 and 3.6 t/ha.

4.7 Evaluation of Evergreen as a Growth Enhancer.

Trials were established to evaluate the effect of foliar applied evergreen at three levels and varying times. Yields during both seasons were not statistically different ($p=0.05$). Highest yield (5.12 t/ha) was achieved when 1.5 litres of the product was applied at tillering, panicle initiation

and flowering. Zero evergreen yielded 4.97 t/ha. During the second season the highest yield of 4.75 t/ha was recorded when 1 Litre of the product was applied at tillering, panicle initiation and flowering. Zero evergreen yielded 4.0 t/ha.

5.0 AGRONOMY (WEED MANAGEMENT)

Weed control continued to play a major role in maximizing rice yields during 2008. Despite the use of preventative measures and cultural practices that normally reduce weed infestation (weed-free seed, sequential land preparation operations, appropriate seed rates, and water management), surviving populations of the major rice weeds (schoonord grass – *Echinochloa crus-galli*, birdseed grass – *E.colonum*, muraina grass – *Ischaemum rugosum*, jhussia – *Fimbristylis miliaceae*, water sedge – *Cyperus difformis*, umbrella sedge – *C.iria*, Soap bush *Sphenoclea zeylanica*, wild clove – *Ludwigia* spp, and duckweed – *Sagittaria guynensis*) were significant enough to warrant the use of chemical control measures in order to maximize grain yield. Propanil and 2,4 – D, the traditional herbicides along with several generic formulation of Bispyribac sodium – Nomina 25 % WP, Rice Weed Killer 400 SC and Nomimattie 20 % SC, were available to farmers for post – emergence use. Nomina was subsequently removed from the "market" because of poor performance in controlling the major weeds. Evaluation continued with Rice Weed Killer and Nomimattie using Propanil as the standard treatment. Three application times were possible despite persistent rainfall during the seedling and early tillering stages of crop growth. These were 25 days after sowing (DAS), 29 DAS and 34 DAS. The herbicide rates are expressed as product/ha.

5.1 HERBICIDE APPLICATION AT 25 DAS

At this relatively early growth stage Propanil 8.423 l/ha (3.41 l/ac), Nomimattie 0.494 l/ha (0.200 l/ac) and 0.395 l/ha (0.16 l/ac) were the best treatments with fresh weights of weeds / m² of 23.1 g and 36.2 g respectively compared with 70.3 g in the untreated plots, while grain yields were greater than that of the untreated plots by 26 %, 20 % and 12 % respectively. The active rates of Nomimattie represented a 20 % increase over the established rate of the original product – Nominee – at this growth stage.

5.2 HERBICIDE APPLICATION AT 29 DAS

At this mid- tillering growth stage, Rice Weed Killer 0.148 l/ha (0.060 l/ac) was the outstanding treatment with fresh weight of weeds that was 53 % less than the untreated plot and grain yield that was 106 % better. Other treatments with relatively low weed weight and good grain yield compared with the untreated plot were Propanil 8.423 l/ha, and Nomimattie 0.593 and 0.20 l/ac. Here again the active rates of Rice Weed Killer and Nomimattie represented a 20 % increase over the established rate of the original product – Nominee – at this growth stage.

5.3 HERBICIDE APPLICATION AT 34 DAS

At this late stage of weed growth acceptable weed control with favorable grain yield when

compared with the untreated plot were obtained from Propanil 8.423 and 11.228 l/ha (3.41 and 4.546 l/ac), rice Weed Killer 0.180 l/ha (0.060 l/ac) and Nomimattie 0.692 l/ha (0.280 l/ac).

5.4 PLANT DENSITY STUDY

Two experiments were conducted to determine the appropriate seed rate for G-0408 when grown under moderate level of Nitrogen application (185.25 kg N/ha), and under high level of Nitrogen application (370.5 kg/ha). Each Nitrogen application level was associated with a basal rate of 28.4 kg/ha P₂O₅ and 37.05 kg/ha K₂O.

Half of the quantity of Nitrogen was applied at 18 days after sowing (DAS) and the remaining half at 45 DAS. Five seed rates ranging between 89.8 and 179.6 kg/ha with increments of 22.5 kg/ha were used.

5.4.1 MODERATE NITROGEN APPLICATION LEVEL (MNAL)

There was a progressive increase in the grain yield of G04-08 as seed rate increased between 89.8 and 157.2 kg/ha following which grain yield declined sharply at 179.6 kg/ha (Fig. 3). This suggested that at moderate Nitrogen application level a seed rate of 157.2 kg/ha was adequate for G04-08.

5.4.2 HIGH NITROGEN APPLICATION LEVEL (HNAL)

There was also a progressive increase in grain yield of G-0408 with increasing seed rate, reaching a maximum at 134.7 kg/ha before declining progressively at 157.2 and 179.6 kg/ha (Fig. 3). This suggested that at high Nitrogen application level a seed rate of 134.7 kg/ha was appropriate for G04-08.

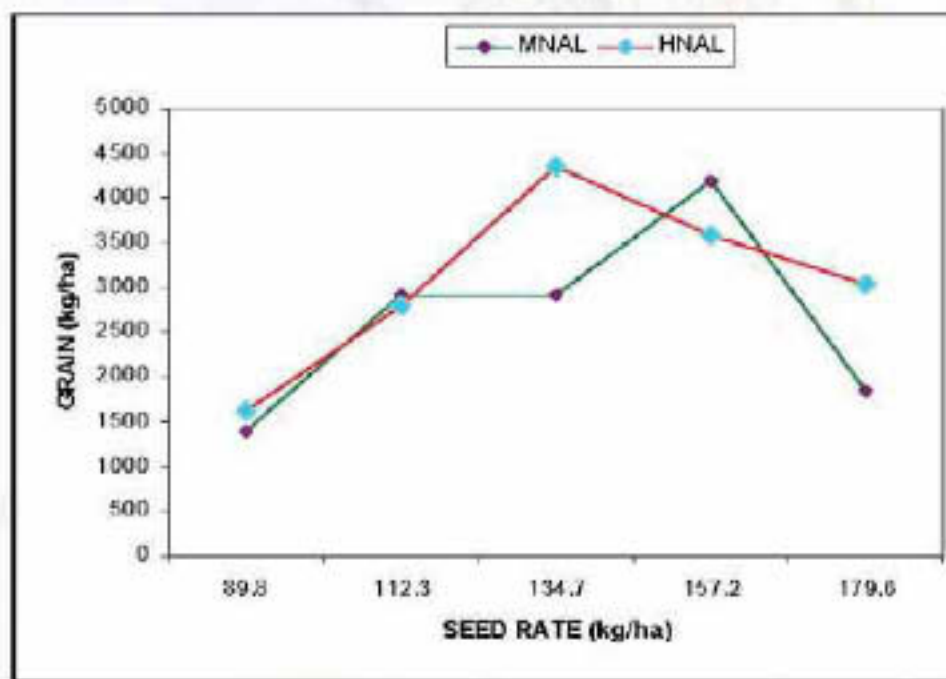


Fig. 3: GRAPH SHOWING GRAIN YIELD OF G04-08 AT VARYING SEED RATES AND MODERATE AND HIGH NITROGEN LEVELS



6.0 ENTOMOLOGY

The year 2008 was rewarding and results obtained have created positive projections for entomological research of rice in Guyana. Research conducted during the year focused on establishing trends of peak activity of major rice insect pests; screening of improved (novel) insecticides for short-term control of the major insect pests and to be used as seed treatment; evaluation of advanced breeding lines and commercial varieties for resistance against major insect pests; and studies were initiated on establishing tolerable injury levels for the major rice insect pests. The pests under study were leaf miner (*Hydrellia* sp), water weevil (*Helodytes foveolatus*), caterpillar (*Spodoptera frugiperda*) and paddy bug (*Oebalus pocius*).

6.1 Monitoring – To investigate peak insect activity, weekly monitoring was done at the Rice Research Station, Burma in cropped and non-cropped areas using a sweep net. Results indicated that the non-cropped habitats had higher population densities when the fields were either not under cultivation or during the early growth stages of the rice plant from February to March and August to September for respective Spring and Autumn Crops. Daily light trap data collection commenced during the second half of the year and during the months of October to December, more than 40 different species of insects were collected. Such data can be used to ascertain periods of peak insect activity, especially for the major pests and their natural enemies. It can also be used to regulate the timings for pesticide applications in view of conserving natural enemies. Therefore, it is paramount that there is a continuous generation of such data (over a number of years), which can also be used in correlation with the weather.

6.2 Screening of Insecticides – Five novel insecticides, viz Leaf guard (Cyromazine), Padan 50SP (1,3-bis(carbamoylthio)-2-(N,N-dimethylamino)-propane hydrochloride), Engeo (Lambda-cyhalothrin), Jade 35EC (Imidacloprid) and Monarca 11.25EC (Thiacloprid+B-cyfluthrin) were screened at three different rates each against early season pests in small plots of 42 m². Each treatment was replicated 3 times. There was a high incidence of leaf miner and after one insecticide application of each treatment; there was 100% recovery as compared to the control with no treatment, which lost about 30% of the plant population. Further testing against the paddy bug was done later in the season using the same plots and again excellent control was obtained. Further evaluation of these novel insecticides will be done at the semi-commercial level during the first crop, 2009.

6.3 Evaluation for Plant Resistance to Insects – The varietal and advanced breeding lines evaluation for their resistance against the major insect pests showed that all the test entries were susceptible to pest damage by the various insect pests. Screening of advanced breeding lines will be an ongoing exercise in the hope of finding resistance to any of the major insect pests. The department is now staffed with an Entomologist, two Research Assistants, one Research Technician and two labourers.

Projections for 2009 include studies on population dynamics, screen house evaluation of threshold levels and simultaneously to chronicle the biology of the various insect pests. Further studies on *Telenomus podisi* for the control of paddy bug will also be initiated.



7.0 PATHOLOGY

During 2008 we saw the emergence of some lesser known diseases. Towards the end of the second crop we experienced some incidences of brown spot that had significantly impacted yields. Thus monitoring will continue as in most cases the diseases are only visible after the damage has been done.

7.1.1 UPLAND BLAST NURSERIES

Von Better

- 601 test lines were evaluated
- There was 20% germination because of heavy bird infestation.
- Brown Spots lesions were present on test lines.
- Less than 1% incidence of blast pathogen appeared on Rustic Border.
- All factors were present in the disease triangle except the pathogen.

Black Bush Polder

- 121 test lines were evaluated.
- There was 80% germination.
- The AYT and OYT showed moderate incidence of Brown Spot.
- Less than 1% incidence of Blast pathogen appeared on Rustic Borders.
- No Blast reaction occurred on test lines.

Timehri

- 108 test lines were evaluated.
 - There was 80% germination.
 - There were no reaction of blast pathogen on test lines or on the Rustic Borders; however, there was less than 5% incidence of brown Spot on the AYT, OYT and the Isogenic Lines.
- Note: Those tested lines that didn't germinate at Black Bush Polder, were the same set that fail to germinate at Timehri.

7.1.2. DISEASE TRIAL AT BRRS

Table below shows disease incidence on a scale of 0-9

There were no significant differences in the level of infestation of the various fungal diseases on commercial and candidate varieties in this trial.

7.1.3. LABORATORY CULTURE AND DIAGNOSIS OF RICE DISEASES

Some level of culturing of rice disease samples was done at NARI Laboratory, but the identification for the various pathogens was not possible.



7.2 Result for second crop 2008

7.2.1. UPLAND BLAST NURSERIES

Locations	Quantity Evaluated	Standard Scoring					Comments
		HR	R	MR	S	HS	
Crabwood Creek 1	37	27	3	5	1	1	-
Crabwood Creek 2	100	56	7	5	7	2	NG - 23
Black Bush Polder	100	23	7	0	3	2	NG - 56
Von Better	101	12	24	48	4	1	NG - 11

VARIETIES	BLAST	BROWN SPOTS	SHEATH BLIGHT	SHEATH ROT	PANICLE BLAST
G04 - 08	0	2	0	0	0
G98 - 135	0	2	0	0	0
G98 - 196	0	1	1	0	0
FG05 - 259	0	1	0	0	0
FG05 - 298	0	1	1	0	0
Rustic	1	3	0	0	0
BR 444	0	0	1	0	0
Diwani	0	0	0	0	0
G98 - 22 - 4	0	1	0	0	0
G98 - 30 - 3	0	2	0	0	0

HR: Highly Resistant; **R:** Resistant; **MR:** Moderate Resistant; **S:** Susceptible; **HS:** Highly Susceptible; **NG:** Not Germinated.

Note: Second and Third Scorings were not possible at Crabwoodcreek 2 because of poor maintenance.

7.2.2 DISEASE TRIAL AT BRRS

This trial was repeated in the second crop and there was no significant level of pathogen infestation of the various diseases. The salt tolerance evaluation will be done in collaboration with the Breeding Department during the next growing season.

7.2.3 LABORATORY CULTURE AND DIAGNOSIS OF RICE DISEASES

The laboratory Culture and Diagnosis of the various fungal rice diseases will be done in collaboration with University of Guyana in Berbice under the supervision of Dr.Subramanian Gomathinayagam. However, some isolation works were done on diseased specimen.



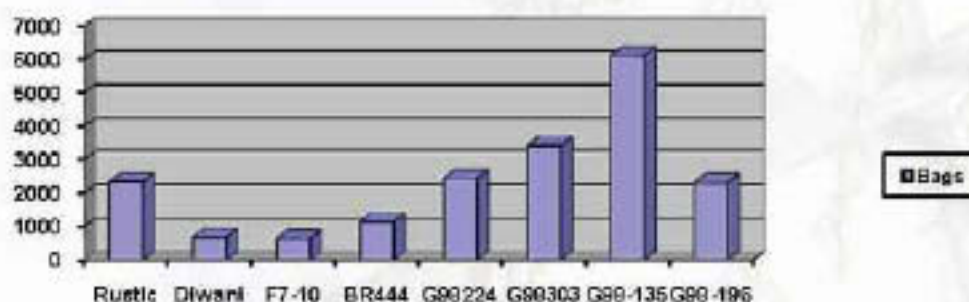
8.0 SEED PRODUCTION

During the year, 1,214.7 tonnes (19,086 bags of 140lbs) of C-1 and C-11 seeds consisting of 8 commercial varieties were produced by the Farm Operation Department at the GRDB, Rice Research Station. Seventy five percent of the seed produced consisted of the G98 varieties, twelve percent Rustic, four percent Diwani, six percent BR 444 and three percent F7-10. Variety G98-135 was produced in the largest volume with a total of 6,113 bags or 389.1 tonnes or 32 % of the annual seed production.

No.	Varieties	1 st Crop 2008			2 nd Crop 2008			Total		
		Area Harvested	Seed Paddy Production		Area Harvested	Seed Paddy Production		Harvested	Paddy Production	
		Hectares	Tonnes	Bags	Hectares	Tonnes	Bags	Hectares	Tonnes	Bags
1	Rustic	20.6	87.7	1,378	18.1	61.4	964	38.7	149.1	2,342
2	Diwani	7.1	26.8	421	4.2	16.4	258	11.3	43.2	679
3	F7-10	5.8	19.7	309	5.8	20.7	325	11.6	40.4	634
4	BR 444	12.1	39.1	615	10.9	33.5	527	23.0	72.6	1,142
5	G98-22-4	20.6	81.6	1,282	21.4	73.6	1,157	42.0	155.2	2,439
6	G98-30-3	28.3	110.0	1,728	23.9	107.7	1,692	51.2	217.7	3,420
7	G98-135	45.1	198.4	3,117	46.1	190.7	2,996	91.2	389.1	6,113
8	G98-196	17.7	69.6	1,094	19.7	77.8	1,223	37.4	147.4	2,317
Total		157.3	623.9	9,944	149.1	581.8	9,142	306.4	1214.7	19,086

Annual Seed Production

Table 4: Showing different varieties of seeds produced at the BRRS



In addition to the above quantity of seeds produced during the year, a total of 272.6 tonnes of grains were also harvested and sold to mill.



Extension Division

The Extension division continued to engage and integrate farmers into the various activities it undertook during the year in all the rice growing regions. These were namely seed production and marketing, technology application, data collection and special activities. All were aimed at empowering the farmers with 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.

Region	Varieties (Bags)								Total
	Rustic	22-4	30-3	F710	BR444	196	Diwani	135	
2	347	626	469	33	10	424	0	370	2,279
3	187	613	758	244	332	492	177	969	3,772
4&5	1952	1327	2153	285	711	1430	357	3727	11,942
6	190	188	497	112	70	378	66	1329	2,830
Total	2,676	2,754	3,877	674	1,123	2,724	600	6,395	20,823

Table 5: Showing varieties of seed padi distribution across the rice growing regions.

During the year a total of 20,823 bags of seeds were received by farmers via the Extension division.

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. This is to monitor germination and emergence of seedlings. Towards this end approximately 3,474 acres were inspected.



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

Seed fields at the Research station amounting to 797 acres were inspected at least 1 – 2 times during the growing of the crop. Findings/observations were conveyed to the farm department to guide them in taking the appropriate measures.

d) **Monitoring/Certification of farmer's seed production**

Farmers contracted to produce seed and others desirous of selling their produce as seed would make requests for their fields to be inspected and certified. Towards this end about 6,205 acres of seed were subjected to the exercise. Seed were sold to the Guyana Rice Producers Association and other farmers.

2. **Technology Application**

a) **Developing Competency of Extension Staff**

Extension Officers were continuously exposed to training that were relevant and impacted positively in the execution of their duties. These include management of pesticides (1), planning on-farm research (1), post harvest management of padi (8), Review of Farmers Field School (8), seed improvement (1), food safety and H.A.C.C.P (2), HIV/AIDS (11) and improved crop management practices (3).

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.

b) **Technology Transfer**

Empowerment of farmer 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 through the Ministry of Agriculture, and 2 and 5 by the Guyana Rice Development Board.

During the year a total of fifty one (51) Farmer Field schools were established and one thousand and thirty eight (1,038) farmers participated in the training sessions.



Region#	# of Schools	# of Participants
2	6	146
3	24	443
4	5	156
5	3	74
6	13	219
Total	51	1038

Table 6: Showing the number of field schools held in the rice growing regions.

As part of the training programme other activities were held which complemented the formal Farmers Field School sessions. These include End of Season review of, training (8), field days (10), and exchange visits (10).

Fourteen brochures covering various aspects of rice production were distributed to farmers.

Notices were placed in the press to inform farmers of field school programmes, office days of Extension officers and sale of seed padi.

Notice boards were also placed at Farmers Field School venues to indicate details of activities.

c) Research and Extension Collaboration

This takes place outside of the formal training programme, but still has implications for farmers and requires coordinated efforts between Research and Extension staff.

Sixteen (16) basic seed plots along with six (6), Advanced Yield Trials (AYT) were established and monitored by Research and Extension staff. Thirteen (13), on-farm trials comprising of two (2) promising lines were also established in the Regions.

Extension officers also assisted in the monitoring of Diammonium Phosphate (DAP) and Monoammonium Phosphate (MAP) trials and lines screened for blast resistance.

3. Data Collection

This exercise provided information to management and other stakeholders on the status of various aspects of the industry. The department prepared and submitted, two hundred and forty (240) weekly and sixty (60) monthly reports. These comprise information on crop production namely; harvesting, sowing, pest and disease levels, drainage and irrigation status, fertilizer use and costs, prices for seed padi. Specific data on Schoonord grass levels and cost of production were also compiled for each crop.

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. It includes exhibition, farmer surveys, investigations, visits by senior government functionaries, farmer meetings etc.

Activity	Host	Regions	# of days
Mill Monitoring	GRDB	All Regions	124
Exhibitions	GRDB	2,3,6	3
Open Day	GRDB	5 & 6	2
Minister visit/other senior officials	MOA, GRDP & RPA	All Regions	26
Investigations	GRDB & RPA	2 & 3	16
Farmers meeting	MMA, RDC, RPA, GRDB & NDC	All Regions	39
Meeting/Workshops	MOA, GRDB & GRPMU	All Regions	61
Retreat	GRDB	4	11
Flood Survey	GRDB	All Regions	15
Opening of DAWA and Anna Regina Pump	MOA	2	2
Opening of Black Bush Polder Seed Facility	MOA, RPA & GRDB	6	1

Table 7: Shows the amount of special activities held in the rice regions in 2008.

Investigations were related to disease outbreaks, fertilizer quality and spray drift.

Farmers meetings were focused on issues affecting crop production, e.g. drainage and irrigation, flooding, accessibility of dams, fertilizer availability and price etc.



Marketing Report

Rice Exports:

2008 was another challenging year for the rice industry; it started with rice price escalating to prices that were never seen in the history of the trade, but this was short lived. The industry was then caught-up in the global recession and financial "crunch" and by the end of 2008 the prices were reducing to the levels where it started in 2008. But despite the lower exports than 2007, in 2008 the export earnings were the highest ever for the history of the rice industry. In 2008 the exports was 196,233 tonnes value US \$ 118,032,802. This represents a 37 % decrease in volume but an increase of 37 % in value. Our major markets continue to be the European Union and CARICOM. EU Imports from Guyana in 2008 account for 99,500 Tonnes or 51 % of the total exports, while CARICOM imports were 69,450 tonnes, which is 36 % of the total. Holland, Jamaica, and Portugal continue to be the countries that are importing large quantities of rice from Guyana.

The Economic Partnership Agreement

In 2008 we would have seen the new trading agreement, the Economic Partnership Agreement (EPA) between CARIFORUM and the European Union that allows for duty free/quota free access for all CARIFORUM goods to the EU markets. This duty free/ quota free access had two exceptions, Rice and Sugar. These commodities were given a short transition period. For a period of two years leading up to full duty-free and quota-free access, CARIFORUM rice exporting countries were given quotas of 187,000 tons for 2008 and 250,000 tons for 2009. The quotas are duty-free compared to the approximately €65 per tonne that was paid in 2007. The quota that was available to the ACP (Guyana and Suriname) in 2007 amounts to 145,000 tonnes and the quotas for 2008 and 2009 therefore represent an increase of 29% and 72%, respectively. Furthermore, the new arrangement makes no distinction between whole grain and broken rice, which means that CARIFORUM exporters should be better able to target the higher-priced market for whole grain rice, once supplies are available.

Jamaica's Commitment to purchase 60,000 tonnes annually

In addition, at the International Rice Conference to Celebrate 100 years as a rice exporter, the Minister of Investment Industry and Commerce of Jamaica, The Hon Karl Samuda, signed an agreement that committed Jamaica to purchase 60,000 tonnes of rice annually from Guyana. This represented a significant inroad in securing markets for Guyana's rice.

While exports have decreased, prices increased significantly. We have seen the following increases:

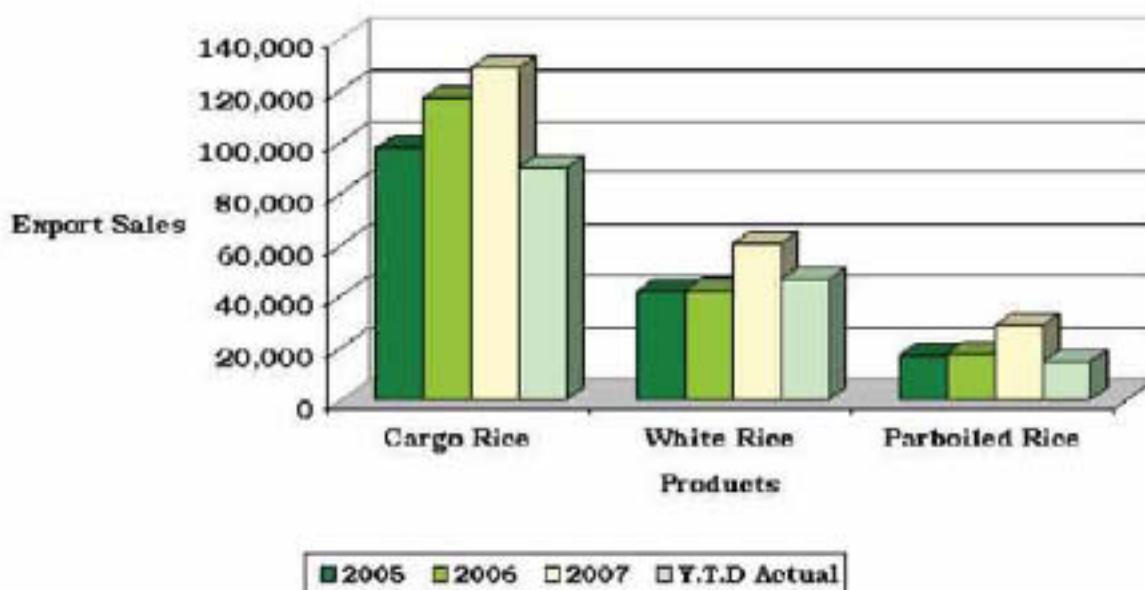
- Cargo rice moved from US \$ 400 – 775 per mt.
- White rice moved from US \$ 650 – 920 per mt.



PRODUCT	ACTUALS			Y.T.D	
	2005	2006	2007	ACTUAL	BUDGET
Cargo Rice	97,868	117,179	128,764	89,915	101,000
Cargo Broken	2,263	3,072	3,968	5,190	9,900
White Rice	41,935	42,501	60,814	46,771	75,050
White Broken	13,564	10,322	26,126	18,471	12,200
Parboiled Rice	16,988	17,804	28,881	15,017	14,500
Parboiled Broken	2,232	3,598	2,097	2,483	4,100
Cargo Parboiled Rice	4,329	6,786	11,360	9,300	15,800
Cargo Parboiled Broken	427	775	2,126	119	2,050
Padi	-	36	-	36	-
Bran	1,386	1,382	2,586	545	-
Others	1,153	1,121	2,714	8,385	-
Total	182,145	204,576	269,436	196,232	234,600

Table 8 : Showing export sales as per product over a four year period.

From the table above, Cargo Rice exported continued to be the largest of the rice types exported for the period under review represents 46% of the total, followed by White Rice 24%, White Broken 9% and Parboiled Rice 8%.



White Broken and Parboiled Rice exports exceed budget level by 51% and 3% respectively, whilst there is a shortfall of the remaining products compared to previous years.



Exports for 2005-2008

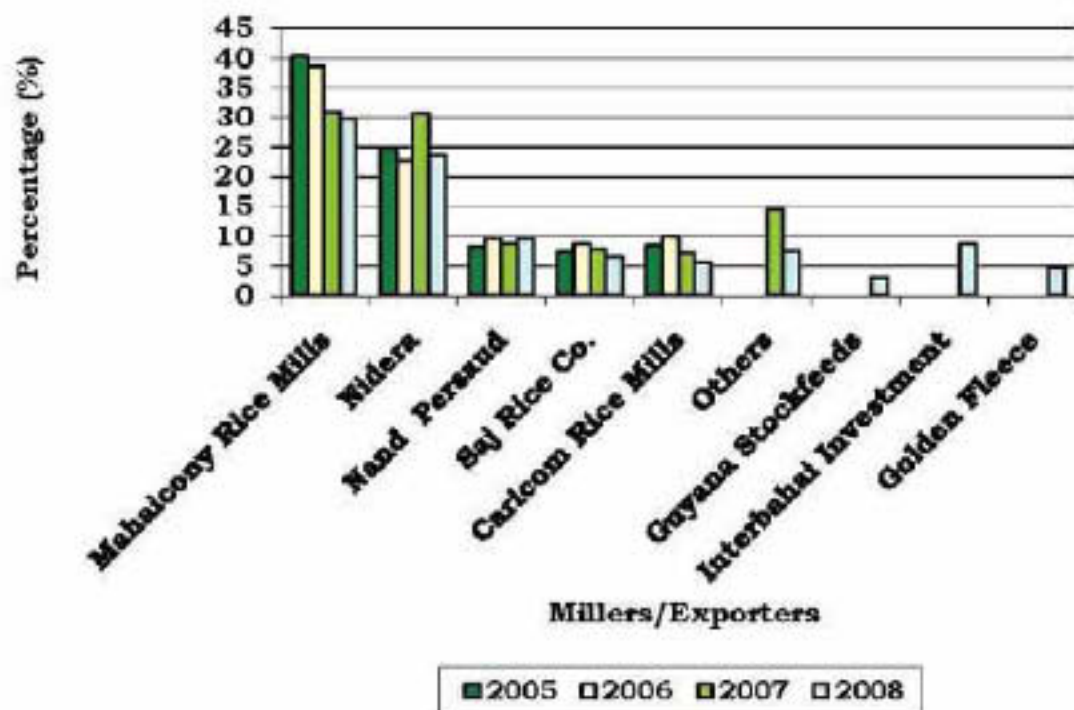


Table 9 : Shows the amount exported by various rice mills over a four year period.

Appendices:

1. Rice statistics 1968-2008
2. Harvesting (Production 2008)
3. Harvesting (Spring Crop 2008)
4. Harvesting (Autumn Crop 2008)
5. Comparison as Per Product 2002-2008
6. Exports as Per Destination 2008
7. Exports According to Product 2008
8. Average Export Prices 2002-2008

GUYANA RICE DEVELOPMENT BOARD

Heads Of Department



Mr. George Jervis
Administrative Manager



Mr. Vivek Joshi
Operations Manager



Mr. Leroy Small
Chief Scientist (ag)



Dr. Mahendra Persaud
Plant Breeder



Ms. Malissa Basdeo
Internal Auditor



Ms. Allison Peters
Quality Control Manager



Mr. Bindraband Bisnauth,
Farm Manager



Mrs. Elaine Reid
Accountant



Mr. Kuldip Ragnauth
Extension Manager

Quality Control Department

Introduction

The department continued to undergo changes during the year under review. Several measures including the recruitment of temporary staff had to be undertaken to strengthen the department during the purchasing of paddy at mills. Staff of the department was required to be present at mills during the purchasing of paddy and this created some amount of pressure on the manpower available thus the recruitment.

The objective was to ensure that paddy was graded and that Regulation no. 8 of 2007 was enforced. This proved to be challenging as both farmers and millers were reluctant to change from a system of purchasing paddy by the bag to the new metric system of purchasing by tonne.

Further measures have been put in place for future seasons.

The acceptance of this new system was very slow as both millers and farmers were reluctant to change from a bag purchasing system to the metric tonne system

1.0 Mill Licencing

Sixty eight (68) mills were licensed during the year under review. This accounted for 274.5 mt/ hr of mill time.

Table 10: Shows a Breakdown of the Milling Capacity of licensed mills per region.

Region	2	3	4&5	6	Total
No. Of licensed mills	14	18	15	21	68
Milling Capacity (Mt/h)	57.75	38	121.5	57.5	274.75mt/h

3.0 Training

(a) Stakeholders Training

Fifty eight (58) industry operatives were trained in grading of rice, paddy and its by-products. The relevant information was garnered during the month of June through a 3-day training programme held in each rice growing region.

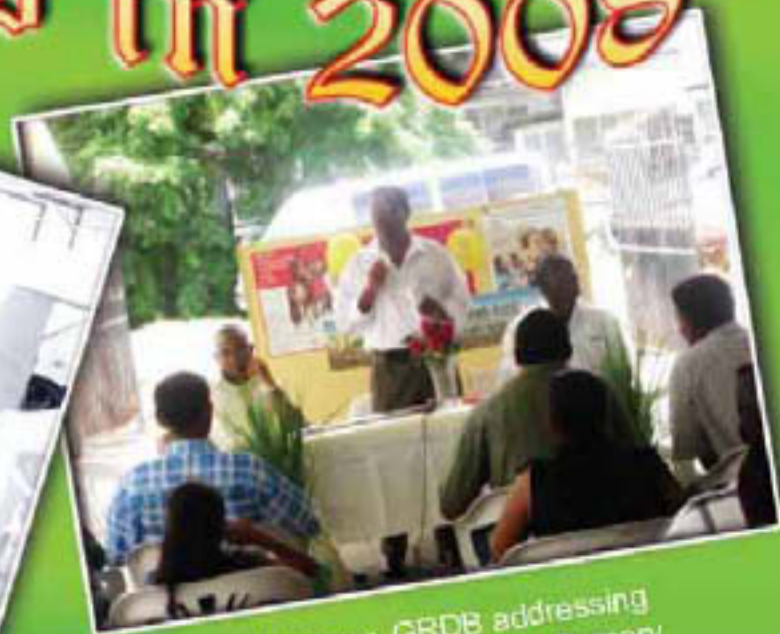
During these sessions training was also received in the management of warehouses and stock control.



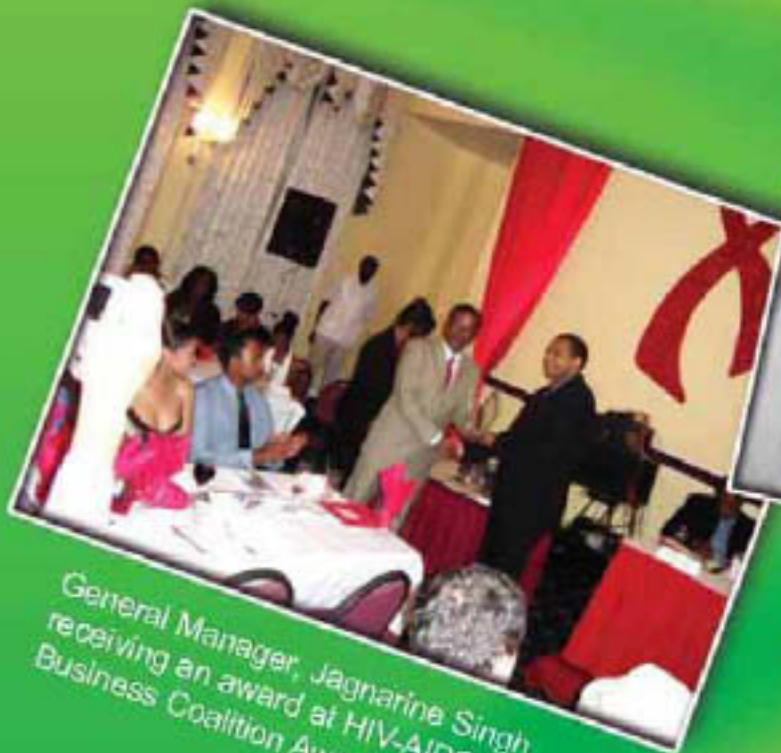
Activities in 2008



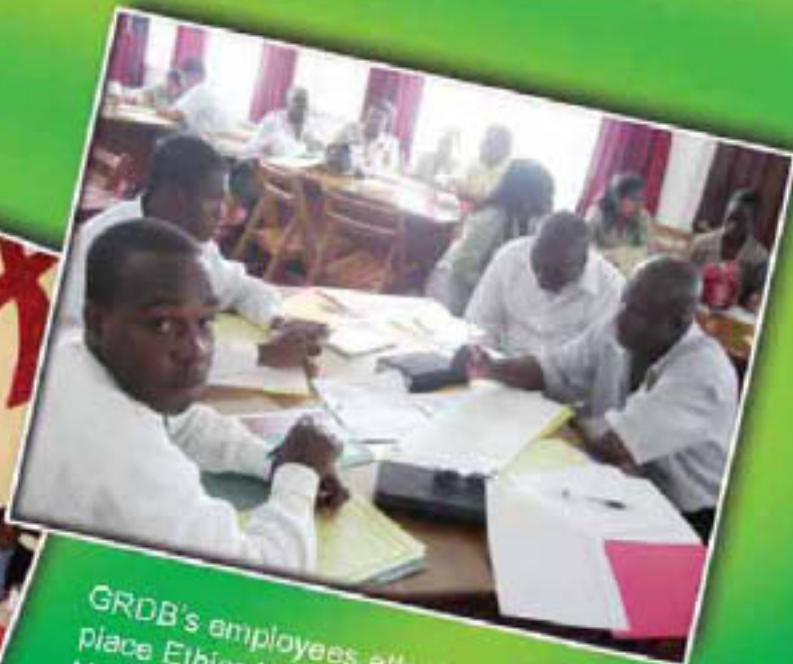
2008 Bursary Awardees. A happy group.



General Manager, GRDB addressing parents and students at 2008 Bursary Award Ceremony.



General Manager, Jagnarine Singh receiving an award at HIV-AIDS Business Coalition Award Ceremony.



GRDB's employees attending a workplace Ethics Workshop at the Red House.

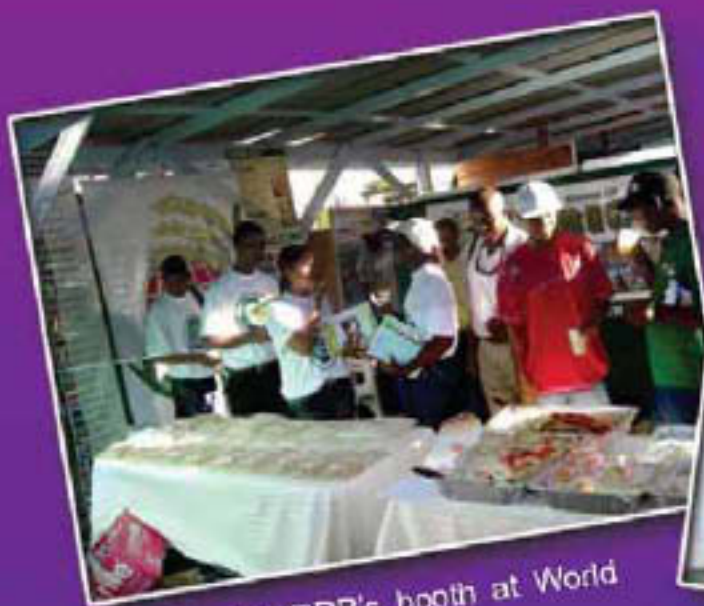
Activities in 2008



Winners of logo and Motto competition with the General Manager, GRDB and PS, Ministry of Agriculture.



Prime Minister Samuel Hinds and Ms. Yvonne Hinds visit GRDB's booth at Berbice Expo 2008.



Visitors at GRDB's booth at World Food Day 2008.



GRDB's Staff at one of the many HIV/AIDS lunch and movie session.

Date	Location	Venue
June 3 – 5, 2008	Region 2	GRDB Office – Anna Regina E’bo
June 10-12, 2008	Region 3	GRDB Office - Crane W.C.D
June 17-19, 2008	Region 4&5	GRDB Burma Rice Research Station
June 24-26, 2008	Region 6	GRDB Office - Corriverton, Berbice

Table 11 : Shows number of training sessions held in warehouse management and stock control in 2008.

Licensed Graders

Fifty eight (58) persons were trained as Licensed Graders during the reporting period as follows:

Region	Number Trained
2	16
3	12
4&5	21
6	9


Table 12 : Number of persons trained as licensed graders in various regions.

(b) Staff Training

Staff within the department attended several programmes designed to enhance their knowledge regarding management and quality management systems and other areas of interest, namely:


- (a) Computer Analysis
- (b) Grading procedures
- (c) ISO/IEC 17020 and Guide 65
- (d) Warehouse Management
- (e) Hazard Analysis Critical Control Point (HACCP)
- (f) Drying and Storage of Paddy in Guyana
- (g) Importance of Traceability
- (h) Hazardous Waste Management





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."

4.0 Monitoring of trade in Paddy

During the 2nd crop, monitoring was heightened by members of the department. Staff were placed at all rice mills during paddy purchasing period.

Emphasis was placed on

- (1) Moisture deduction (2nd schedule)
- (2) Paddy weight in metric tonnes
- (3) Calibration of moisture meters and scales
- (4) Documentation of sale
- (5) Agreement of sale (6th schedule)
- (6) Grading of paddy

5.0 Certification of seed paddy

Seed produced by the Burma Rice Research Station was inspected and certified by staff of the department once they attained the necessary criteria to be recommended as seed.

For the year 18,807 bags (9,944 bags in spring crop and 8,863 bags in autumn crop) were certified as seed.

6.0 Quality Control/Extension Collaboration

Staff worked together with the extension staff at their 'field schools' to disseminate information needed by farmers regarding the systems involved in the purchase of paddy. This information ensured that farmers were made aware of all the correct procedures that should obtain at mills when they are conducting a sale.

7.0 Data Collection

This has become an integral part of the division's daily operations ensuring that management is kept aware of the operations being conducted at mills with regards to production and stock levels of both paddy, rice and by-products as mandated by the Rice Factories Act of 1998.

The availability of rice, its quality and fair prices were monitored in all regions by the department. This assists policy makers and the Board in ensuring that adequate stocks are always available and equitably distributed for local consumption.

8.0 Laboratory Certification

Work is still on-going and is scheduled to be completed by June 2009. The Quality Manual and Grading Procedures have been completed and is presently being reviewed by The GNBS. All systems are in place and internal audits and continuous training of the laboratory staff is being conducted according to ISO/IEC 17020 and ISO Guide 65.

9.0 Regulations (Amendment) 2008

During February 2008 there was an amendment of Regulations 3 and 12 of the GRDB Regulations no. 8 of 2007. This amendment sought to reduce the manual operation of scales (as this lead to allegation of weight tampering) to an electronic system.



SOME NOTABLE ACTIVITIES IN 2008

100 AND COUNTING

The year under review (2008) marked a very significant milestone for the rice industry and Guyana. It marked one hundred (100) years since Guyana has been a net exporter of rice. Significantly, this notable achievement coincided with the fact that the value of rice export for the same year has been the highest (US\$ 118,032,802,90) in Guyana's history.

As a way of commemoration in observance of the achievement a committee was set up by the Ministry of Agriculture and the Guyana Rice Development Board to undertake and plan a calendar of activities to celebrate the occasion. The Permanent Secretary of the Ministry of Agriculture, Dr. D Permaul, spearheaded a ten man committee to plan and organize relevant activities to celebrate the occasion.


It was decided by the committee, that there was a need for a logo and motto that could have identified with activities in relation to the occasion. Thus the first activity was birthed, a logo and motto competition. Over one hundred and fifty (150) persons entered this competition. The competition saw very interesting and imaginative entries. In the end the winning entry in the logo senior category came from twenty-one year old Chabilall Suepaul and the winning junior entry in the same logo competition was submitted by eighteen year old Vickash Bhawani. The winning motto "Rice our life our history" was courtesy of twenty-four year old Angelique Williams.

However the highlight of activities was an International Rice Conference held on the 7th and 8th November, 2008 at the International Conference Centre. The conference drew presenters from a number of agriculture institutions and Universities across the world. The presenters made presentations on a number of issues affecting rice ranging from technology in rice cultivation, rice genetics, weed management, storage management and a number of other issues over the two day period. Speaking at the opening of the conference President Bharrat Jagdeo noted the importance of the rice sector to Guyana's economy and congratulated the organizers of the conference. The President highlighted the essential link between rice, slavery and indentureship, he said "even as we celebrate this achievement, it is important that we understand better who we are". Minister of Agriculture Robert Persaud, addressing the gathering mirrored the sentiments of the President and noted that "rice is not only a major grain which has defined our culture, our cuisine, our nutrition and our economy, it is a source of employment, it defines a potential for growth which can be sustainably developed utilizing our natural wealth of arable land, fresh water and good climate".

The Jamaican Minister of Industry, Investment and Commerce, Karl Samuda who attended the opening of the conference gave a commitment on behalf of the government of Jamaica that his country will continue to take the 60,000 tonnes of rice that the two countries had agreed upon a number of years ago. A memorandum of understanding (MOU) to this regard was signed between the Jamaican Minister and the then Guyana Minister of Foreign Trade Dr. Henry Jeffery. Minister Samuda assured exporters and the Guyana government of his government's readiness to take the agreed amount and there should be no concerns by the parties involved.

Additionally, there was also the launching of a Rice Recipe Book "101 Ways to Cook Rice" that explains a number of ways that rice can be prepared aside from the conventional ways that are known.




Staff
HEAD OFFICE

General Manager

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

ADMINISTRATION DIVISION

Administrative Manager

George Jervis, B.Sc. Agriculture (UG)
Company Secretary

Communication Officer

Brushell Blackman, B.Soc. Sc. Communication (UG)

Occupation Health & Safety Officer

Ella P. Isaacs, Dip. Occupation Health & Safety (UG)

FINANCE DIVISION

Accountant

Elaine Reid, Dip. Accounts (UG),
B.Soc. Sc. Accounts (UG)

Assistant Accountant

Errol Chester, Dip Accounts (UG)

MARKETING DIVISION

Marketing Assistant

Gloria Chester, B.Sc. Marketing (UG)
Dip. Marketing (UG)**QUALITY CONTROL DIVISION**

Quality Control Manager (ag)

Allison Peters, B.Sc. Agri. (UG)

REGION 2Regional Supervisor
Grading OfficerDhirendranath Singh, B.Sc. Agri. (UG)
Donellia D'Oliveira, Dip. Agri. (GSA)

Grading Officer
Grading Officer

Kevin Joseph, Cert. Agri. (GSA)
Kishan Indrawattie, Cert. Agri. (GSA)

REGION 3

Regional Co-ordinator

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

Grading Officer
Science (GTI)
Grading Officer

Donette Waithe, Dip. Secretarial
L.Manohar, Dip. Agri. (GSA)

REGION 4

Regional Co-ordinator

Coleen Bailey-Arjune, Cert. Agri. GSA
Cert. Supervisory Management, (IDCE)

Technical Assistant
Research Assistant

Ezekiel Jacobs
Sinnott Burnett-Gould, B.Sc. Agri.
(UG), Dip. Agri. (GSA)

Grading Officer

Shemeka Reece, Diploma Agri.
(GSA)

REGION 5

Regional Co-ordinator
Grading Officer
Grading Officer

Errol Joseph, Cert. Agri. (GSA)
Beverly Joseph
Rishal Ramsarran, Dip. Agri. (GSA)

REGION 6

Regional Supervisor
Grading Officer
Grading Officer

Homechand Ramlall, Dip. Agri. (GSA)
Steve Lyte
Herman Garnett

EXTENSION DIVISION

Extension Manager

Kuldip Ragnauth, Dip Agri. (GSA)
B.Sc. Agri. (UG)

REGION 2

Regional Rice Extension Officer
District Rice Extension Officer

Cyril Lochan, Extension Certificate
Supervisory Management Certificate
Dharamchand Das, Extension Cert.



District Rice Extension Officer
District Rice Extension Officer

Tamesh Ramnauth, Cert. Agri. (GSA)
Davendra Singh, Dip. Agri.

REGION 3

Regional Rice Extension Officer
Extension Officer

Jadunauth Persaud, Dip. Agri. (GSA)
Sandeep Ramsarran, PC Technician

REGION 4 & 5

Regional Rice Extension Officer
District Rice Extension Officer
District Rice Extension Officer

Philbert Rampersaud, Dip. Agri. (GSA)
Satish Sookram, Dip. Agri. (GSA)
Shabeer Bacchus, Dip Agri. (GSA)

REGION 6

Regional Co-ordinator
Extension Officer

H. Ramlall Dip. GSA
P. Ramcharitan

RICE RESEARCH STATION, BURMA,

PLANT BREEDING

Plant Breeder
Research Assistant
Research Technician

Mahendra Persaud, PhD, (India)
Rajendra Persaud, B.Sc. Agri. (UG)
Elijah Adams, Cert. Agri. (GSA)

PATHOLOGY

Research Technician
Research Technician

Rohan Persaud
Bissessar Persaud, Dip. Agri. (GSA)

ENTOMOLOGY

Entomologist

Research Assistant
B.Sc Agri. (UG)
Research Technician

Vivian Baharally, B.Sc. Agri. (UG),
M.Sc. Entomology (India)
Satnand Narine, Dip. Agri. (GSA),

Dindyal Jagdeo

AGRONOMY (WEEDS)

Chief Scientist (ag)

Leroy Small, M.Sc. Agri.

AGRONOMY (SOILS)

Agronomist	Lambert Chester, B.Sc. Agri. (UG), M.Sc. -Agri. and
Mechanical (AAMU) Research Assistant Research Technician	Gordon Gouveia, B.Sc. Agri. (UG) Niron Singh

ADMINISTRATION

Farm/Seed Production Manager	Bindraband Bisnauth, Proficiency Cert of Examination, College of Preceptors Cert, General Cert of Examination
Chief Clerk	Marcelle McRae, Dip. Accounts (UG)

WORKSHOP

Supervisor Mechanic	Lennox Wilson, Cert. Agri. Mechanics Rakeshwar Singh
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STUDY LEAVE

1. Tyrone English	Second Year Student UG, B.Sc.
2. Rajendra Persaud	Second Year Post Graduate- India
3. Violet Henry	First Year UG
4. Bisessar Chitamani	Second Year Post Graduate- India
5. Phillip Jainarine	First Year GSA
6. Jenarine Hardat	First Year GSA



Appendix 1

RICE STATISTICS 1968 - 2008

Year	Hectare Harvested	Paddy Production	Yield per Hectare Tonnes	140 lbs (HA)	Rice Equiv Tonnes	Quantity Exported (MT)	Value G\$ & US\$
1968	126,702	221,869	1.7	27.6	139,643	83,367	\$27,632.00
1969	113,081	173,392	1.5	24.2	112,644	62,243	\$18,147.00
1970	119,182	222,469	1.8	28.3	144,605	69,347	\$18,047.00
1971	94,551	187,535	1.9	31.1	121,959	67,515	\$21,334.00
1972	79,462	147,130	1.8	28.1	95,639	69,949	\$25,251.00
1973	92,821	152,380	1.6	25.9	99,034	47,814	\$25,005.00
1974	105,741	255,888	2.4	38.0	165,857	50,827	\$49,028.00
1975	108,486	297,099	2.7	43.2	172,259	82,035	\$84,937.00
1976	94,027	172,804	2.0	32.3	103,754	70,681	\$73,594.00
1977	130,529	358,290	2.7	43.2	214,972	65,856	\$66,812.00
1978	114,845	308,207	2.6	42.2	184,986	104,761	\$85,983.00
1979	90,227	240,558	2.6	41.8	144,328	84,080	\$80,814.00
1980	95,991	281,848	2.9	46.1	169,107	81,008	\$87,481.00
1981	88,053	276,006	3.0	48.9	165,804	78,010	\$110,009.00
1982	95,280	302,671	3.1	49.8	181,603	35,876	\$60,767.00
1983	76,807	245,064	3.2	51.1	147,639	41,715	\$64,933.00
1984	92,987	299,628	3.2	50.6	179,795	47,498	\$80,945.00
1985	77,777	280,207	3.3	52.8	158,124	28,339	\$56,594.00
1986	89,977	293,079	3.4	54.8	171,044	38,834	\$57,234.00
1987	75,145	243,388	3.2	50.8	145,878	68,807	\$157,128.00
1988	74,223	228,962	3.0	48.1	132,291	65,926	\$139,165.00
1989	68,544	237,183	3.4	54.5	142,310	40,575	\$387,427.00
1990	51,368	156,740	3.0	47.8	83,444	50,943	\$613,220.00
1991	76,209	251,321	3.3	51.8	150,783	54,047	US\$17,202,835.00
1992	77,327	288,000	3.7	58.2	171,000	115,102	US\$36,000,195.00
1993	98,081	338,207	3.4	54.5	201,702	124,089	US\$39,045,227.00
1994	97,660	378,432	3.8	61.0	233,111	182,686	US\$56,547,051.00
1995	132,344	525,500	3.9	62.4	315,301	200,336	US\$76,387,522.00
1996	135,436	543,437	4.0	63.2	332,542	262,265	US\$83,718,748.21
1997	142,782	588,186	4.1	64.7	340,911	285,051	US\$84,224,971.47
1998	129,489	522,907	4.0	63.4	339,890	249,755	US\$73,259,798.73
1999	147,071	582,260	3.9	60.7	365,489	251,519	US\$71,035,877.51
2000	115,812	448,740	3.8	61.0	281,967	207,638	US\$61,790,072.00
2001	124,565	495,862	3.9	62.7	321,310	209,042	US\$50,081,834.00
2002	107,902	443,854	4.1	64.7	288,375	193,416	US\$45,463,590.45
2003	127,862	546,183	4.3	67.4	355,019	200,432	US\$45,273,049.81
2004	115,742	500,911	4.3	68.1	325,592	243,093	US\$55,069,513.74
2005	106,845	420,365	3.9	62.1	273,237	192,175	US\$46,172,149.45
2006	102,934	472,363	4.6	72.2	307,036	204,577	US\$64,622,559.62
2007	105,895	459,853	4.3	68.2	299,125	259,436	US\$75,251,494.99
2008	119,792	507,038	4.2	66.8	329,574	196,233	US\$118,032,802.90

Appendix 2

GUYANA RICE DEVELOPMENT BOARD
AUTUMN CROP 2008
HARVESTING

REGION / ZONE	HECTARE		Prepared	Sown	Harvested	Paddy Production Bags	N/T	Rice Equiv. MT	Yield (Bags/Ha)	Yield (Tons/Ha)	%
	Target	Actual									
REGION 2											
Essequibo	13,158	12,561	12,561	12,561	12,411	917,215	58,292	37,370	73.9	4.7	98.8
Sub-Total	13,158	12,561	12,561	12,561	12,411	917,215	58,292	37,370	73.9	4.7	98.8
REGION 3											
Wakenham	1,215	919	919	919	913	68,140	4,011	2,607	59.2	4.4	90.3
Logan	1,619	1,680	1,680	1,680	1,630	88,650	5,629	3,655	54.3	3.5	100.0
Hogg Island	122	113	113	113	113	6,440	409	266	56.8	3.6	100.0
West Demerara	5,568	5,665	5,665	5,665	5,646	422,515	25,839	17,445	74.8	4.8	99.7
Sub-Total	8,624	8,324	8,324	8,324	8,302	560,645	35,893	23,974	59.9	4.4	99.7
REGION 4											
Golden Grove/Cane Grove	3,036	3,004	3,004	2,895	2,895	209,210	13,293	8,638	72.3	4.6	100.0
Sub-Total	3,036	3,004	3,004	2,895	2,895	209,210	13,293	8,638	72.3	4.6	100.0
REGION 5											
Mahical/Abury	11,336	9,595	9,595	9,595	9,519	694,240	35,841	23,287	59.3	3.9	99.2
West Berbice	18,219	13,927	13,927	13,725	13,522	701,400	44,554	28,560	51.9	3.3	98.5
Sub-Total	29,555	23,522	23,522	23,320	23,040	1,265,640	80,395	52,296	54.0	3.5	98.8
REGION 6											
Frontlands	10,122	10,043	10,043	9,873	9,859	567,713	35,052	23,440	57.6	3.7	98.9
Black Bush Polder	6,983	4,794	4,794	4,794	4,785	263,940	15,766	10,596	55.2	3.5	99.8
Sub-Total	17,005	14,837	14,837	14,666	14,644	631,653	52,827	34,336	56.8	3.6	99.8
TOTAL	71,578	62,348	62,348	61,766	61,292	3,804,363	241,658	157,077	62.1	3.9	99.2

Appendix 3

**GUYANA RICE DEVELOPMENT
BOARD**
**SPRING CROP 2008
HARVESTING**

REGION / ZONE	HECTARE Target	Prepared	Sown	Harvested	Paddy Production Bags	MVT	Rice Equiv. MVT	Yield (Bags/Ha)	Yield (Tons/Ha)	% Harvested
REGION 2										
Essequibo	13,158	12,834	12,834	12,768	900,908	57,226	37,197	70.6	4.5	99.5
Sub-Total	13,158	12,834	12,834	12,768	900,908	57,226	37,197	70.6	4.5	99.5
REGION 3										
Wakenaani	891	308	308	308	22,040	1,400	910	71.8	4.6	100.0
Lagan	1,215	1,033	1,033	1,028	68,526	4,353	2,829	56.7	4.2	99.5
Hogg Island	101	81	81	81	5,000	318	206	61.8	3.9	100.0
West Esmerara	3,628	3,508	3,508	3,562	463,260	29,427	19,127	83.3	5.3	99.9
Sub-Total	7,835	6,989	6,990	6,978	558,826	35,497	23,073	80.1	5.1	99.8
REGION 4										
Golden Grove/Cana Grove	3,037	2,972	2,943	2,943	216,835	13,774	8,853	73.7	4.7	100.0
Sub-Total	3,037	2,972	2,943	2,943	216,835	13,774	8,853	73.7	4.7	100.0
REGION 5										
Mahacca/Abury	11,336	10,105	9,684	9,381	648,760	41,210	26,786	69.2	4.4	96.9
West Berbice	16,394	14,742	14,498	13,716	948,640	60,258	39,180	69.2	4.4	94.6
Sub-Total	27,730	24,850	24,182	23,097	1,697,400	101,468	65,964	69.2	4.4	95.6
REGION 6										
Frontlands	9,312	8,749	8,722	8,700	609,180	38,686	25,152	70.0	4.4	99.8
Black Bush Polder	6,883	4,223	4,217	4,137	294,689	18,719	12,167	71.2	4.5	98.1
Sub-Total	16,195	12,968	12,938	12,837	903,869	57,416	37,319	70.4	4.5	99.2
TOTAL	67,755	60,814	59,857	58,823	4,177,836	265,308	172,487	71.3	4.5	97.9

Appendix 4

**GUYANA RICE DEVELOPMENT
BOARD
PRODUCTION 2008
HARVESTING**

REGION / ZONE	HECTARE Target	Prepared	Sown	Harvested	Paddy Production Bags	M/T	Rice Equiv. M/T	Yield (Bags/Ha)	Yield (Tons/Ha)	% Harvested
REGION 2										
Essequibo	20,316	25,395	25,395	25,179	1,818,121	115,489	75,068	72.2	4.6	99.2
Sub-Total	20,316	25,395	25,395	25,179	1,818,121	115,489	75,068	72.2	4.6	99.2
REGION 3										
Wakhaman	2,106	1,227	1,227	1,221	85,180	5,411	3,517	89.8	4.4	99.5
Lagunas	2,934	2,663	2,663	2,657	157,076	9,978	6,485	59.1	3.8	99.8
Berg Island	223	194	194	194	11,440	727	472	58.9	3.7	100.0
West Demerara	11,296	11,230	11,230	11,207	885,275	56,265	30,572	79.6	5.0	99.6
Sub-Total	16,459	15,313	15,313	15,279	1,139,471	72,380	47,047	74.6	4.7	99.8
REGION 4										
Golden Crook/Cane Grove	6,073	5,976	5,976	5,848	426,045	27,063	17,591	73.0	4.6	100.0
Sub-Total	6,073	5,976	5,976	5,848	426,045	27,063	17,591	73.0	4.6	100.0
REGION 5										
Mahaica/Abary	22,672	19,700	19,279	18,899	1,213,000	77,061	50,083	64.2	4.1	98.0
West Berbice	34,413	28,672	28,223	27,238	1,650,040	104,812	68,128	80.6	3.8	96.5
Sub-Total	57,085	48,372	47,502	46,137	2,863,040	181,863	118,211	62.1	3.9	97.1
REGION 6										
Frontlands	19,434	18,789	18,594	18,559	1,176,893	74,757	48,592	63.4	4.0	99.8
Black Bush Folders	13,766	9,016	9,010	8,973	558,029	35,485	23,065	62.6	4.0	99.0
Sub-Total	33,200	27,805	27,604	27,481	1,735,522	110,242	71,657	63.2	4.0	99.6
TOTAL	159,333	122,861	121,653	119,914	7,962,199	507,038	329,674	66.6	4.2	98.6

The Functions of the Guyana Rice Development Board

INTRODUCTION

The Functions of the Guyana Rice Development Board.

The Guyana Rice Development Board was established by Act Number 15 of 1994 and as provided for under section 3 (iii), Establishment, Management, Powers and Functions of the Board, is headed 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 is as follows, "An integrated, sustainable, and profitable industry producing and marketing rice for the benefit of all Guyanese."

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."

Organisational 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 consists of an Accountant, Assistant Accountant, Senior and Junior Accounts Clerk, Cashier and a Typist/Clerk. The Department is responsible for the collection of levy and fees. These fees are charged for the grading of paddy or rice.

Administration

This Department consists of a Manager a Confidential Secretary, a Clerk and an Office


Appendix 5
EXPORTS ACCORDING TO PRODUCT - 2008

PRODUCT	QUANTITY (MT)	% OF TOTAL EXPORTS
BRAN	545.000	0.28
C.P.B PKG	21.000	0.01
C.P.B BKN	119.000	0.06
C.P.B RICE	9,301.000	4.73
CARGO BKN	5,191.000	2.64
CARGO RICE	89,915.000	45.82
DAMAGE P.B	201.000	0.1
P.B PKG BK	18.000	0.01
P.B PKG RICE	5,910.000	3.02
PADDY	36.000	0.02
PARB BKN	2,483.000	1.26
PARB RICE	15,017.000	7.65
PET PKG RICE	24.000	0.02
PET RICE	950.000	0.48
REJ. P.B. RICE	884.000	0.45
WHT BKN	18,472.000	9.42
WHT PKG BKN	52.000	0.03
WHT PKG RICE	323.000	0.16
WHT RICE	46,771.000	23.84
TOTAL	196,233.000	100%


Appendix 6
COMPARISON OF EXPORTS AS PER PRODUCTS (Metric Tonnes) 2002-2008

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

Appendix 7

EXPORT AS PER DESTINATION 2008

DESTINATION	QUANTITY (MT)	TOTAL EXPORT PERCENTAGE
CARICOM:		
ANTIGUA	384	
BARBADOS	2,159	
DOMINICA	964	
GRENADA	1,818	
JAMAICA	42,199	
ST. KITTS	120	
ST. LUCIA	826	
ST. VINCENT	1,638	
SURINAME	556	
TRINIDAD	19,186	
SUB TOTAL	69,450	35.40%
EUROPEAN UNION:		
BELGIUM	1,868	
FRANCE	192	
GERMANY	10	
GUADELOUPE	2,196	
HOLLAND	56,297	
MARTINIQUE	2,106	
POLAND	3,449	
PORTUGAL	33,165	
UNITED KINGDOM	217	
SUB TOTAL	99,500	50.70%
OCT:		
ARUBA	5,715	
SUB TOTAL	5,715	2.91%
OTHERS:		
COLOMBIA	708	
CUBA	136	
DAKAR, SENEGAL	288	
DOMINICAN REPUBLIC	46	
GAMBIA	2,710	
GUATEMALA	506	
HAITI	13,703	
PANAMA	3,473	
SUB TOTAL	21,568	10.99%
TOTAL	196,233	100%

Appendix 8

Average Export prices 2002-2008

REGION	2002	2003	2004	2005	2006	2007	2008
EUROPEAN UNION							
CARGO PB BKN	-	-	100	110	110	110	-
PARB. BKN	100	100	100	110	110	110	295
REJ. PB RICE	110	-	-	-	-	158	-
RICE CHIPS	-	-	-	-	-	-	-
PADDY	-	-	-	-	-	-	-
CARGO RICE	215	208	218	240	260	282	600
CARGO BKN	130	100	118	-	142	148	265
WHITE RICE	-	-	-	-	-	320	530
WHITE BKN	155	143	143	160	160	168	425
C.P.B RICE	235	240	240	244	308	251	480
PARB. RICE	-	-	-	-	-	400	-
CARICOM							
CARGO RICE	-	-	217	364	260	283	623
CARGO BKN	120	100	-	105	110	-	295
WHITE RICE	270	260	275	275	295	347	688
WHITE PKG. RICE	-	-	-	352	390	594	763
WHITE BKN	-	140	140	180	175	178	426
C.P.B RICE	234	240	240	290	310	285	945
C.P.B. BKN	100	100	100	104	120	110	190
PARB RICE	392	370	390	399	400	425	824
PARB PKG. RICE	-	-	-	468	475	638	851
PARB BKN	138	100	130	162	165	164	354
REJ. PB RICE	110	110	153	170	178	195	-
BRAN	50	45	40	62	63	45	118
PET RICE	-	-	-	-	-	190	-
OCT							
CARGO RICE	207	206	218	242	260	250	557
CARGO BKN	116	100	118	121	110	145	355
WHITE RICE	331	-	245	245	300	-	-
WHITE BKN	145	140	143	150	160	181	-
C.P.B RICE	240	-	-	-	-	-	-
C.P.B BKN	-	-	100	104	-	-	-
REJ PB RICE	-	-	-	-	-	-	-
BRAN	-	-	-	-	-	-	-
OTHERS							
CARGO BKN	-	-	127	-	110	-	-
WHITE RICE	-	260	245	273	295	308	703
WHITE BKN	-	155	150	174	160	166	435
PARB. RICE	-	-	-	-	-	373	-
PADDY	-	-	131	-	-	-	-
PET RICE	-	-	40	-	-	194	600
CHIPS	-	-	-	-	-	190	-
CARGO RICE	-	-	226	233	265	280	510
PARB PKG RICE	-	-	-	-	-	462	-
PARB RICE FLOUR	-	-	-	-	-	353	-
DIS. WHT RICE	-	-	-	-	-	230	-
WHT RICE FLOUR	-	-	-	-	-	353	-
C.P.B. RICE	-	-	220	-	-	-	480

GUYANA RICE DEVELOPMENT BOARD

ALL OFFICES IN THE REGIONS

Anna Regina Sub-Office
Essequibo Coast

Regional Supervisor: Dhirendranath Singh
Tele: 771-4158
Fax: 771-4158

Crane Sub-Office
West Coast Demerara

Regional Co-ordinator: Charles Hope
Tele: 254-0355

Burna Rice Research Station
Burna, Mahaicony
East Coast Demerara

Regional Co-ordinator: Errol Joseph
Tele: 221-2646
Fax: 232-1304

Corriverton Sub-Office & Black Bush

Regional Supervisor: Hornchand Ramlall
Tele: 335-3318
Fax: 335-3318

Assistant. It 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

This Department is headed by a Manager and has other officers namely a Marketing Assistant, Marketing Clerk, Customs Clerk and a Confidential Secretary. The Department is solely responsible for the preparation of all documentation with regards for the exporting of rice from Guyana.

Quality Control

This Department is responsible for the ensuring the quality of rice among rice millers and exporters. The Department is headed by a Manager 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 aspect of the Guyana Rice Development Board, forms an integral part of its operations.

It is based at the Rice Research Station at Burma. It is there that new varieties, strains are developed, so that farmers can have a better plant which can then yield a high volume 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, 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. Here Extension Officers in all the regions would meet with farmers and would serve as an advisory body to assist the farmers in new technology available. Where demonstrations are needed the Extension officers serve in this capacity.

All the departments of the Guyana Rice Development Board work together and complement each other in order to achieve the mission and vision of the organization.



Chairman's Statement

Guyana's rice industry for 2008 has exported US\$118M, which represents the highest earnings ever for the sector. This has taken place against the backdrop of the global financial crisis occasioned by cuts in consumer spending, financing and trade. Notwithstanding, the industry has responded positively and our farmers and millers are continuing to recapitalize their machine/equipment pool. Rice continues to make significant strides as a socioeconomic crop in Guyana. From a very small and quite subsistence beginning, it has grown today to one of the pillars of Guyana's Economy. The Guyana Rice Development Board is the government agency tasked with the responsibility to provide the necessary legislative and technical support to the sector.

Rice is considered a staple, which is durable. In Guyana, rice is cultivated twice per year, which means the storage function is critical for marketing both locally and internationally. With consumption being regular and production seasonal, it is vital that there are adequate storage facilities for rice to ensure that there is always sufficient stock available for consumption and export. The development of appropriate storage technology, at export terminals, on farm and at mills needs to be accelerated if we wish to be an efficient and reliable supplier of high quality rice.

To propel the rice industry in becoming more efficient and modern, the GRDB has done extensive research work in producing varieties of paddy that are high yielding, pest and disease resistant and is working with farmers to build capacity on new technologies. Currently, the Board is in the final stage of releasing two high yielding pest and disease resistant varieties. However, greater research needs to be conducted in agri-engineering for equipment and machinery that are now available on the market so that Guyana can benefit from technologies in the industry. This will ultimately make the industry more efficient and productive.

In 2008, we faced the negative effect of the changing weather. Due to the extensive rainy season towards the latter half of the second crop, we suffered declines in yield. With wet, humid conditions we experienced greater disease problems. This is another example how extreme weather events can have a negative impact on the industry.

During 2008, a process started that will lead to Guyana trading rice duty free and quota free to the European Union. Under the New Economic Partnership Agreement with the European Union and CARIFORUM, rice will have a duty free quota for 2008 and 2009 and by 2010 it will be duty free as well as quota free.

The GRDB and the rice sector have benefitted from robust support emanating from the Ministry of Agriculture, its local and international partners such as the European Union, Inter-American Development Bank, Food and Agricultural Organization of the United Nations and the International Fund for Agricultural Development. We wish to thank all our partners for their exemplary work and support.

Drainage and Irrigation feature prominently in successful rice growing in Guyana. At the national level, with support from our international partners, continuous investments are being made to provide water services and pilot testing of Water Users' Associations have begun in all rice growing regions.

2008 was celebrated as 100th year of Guyana being an exporter of rice. This is a significant milestone for an industry that was started by slaves and indentured immigrants, and with very little Government support in its early phase. We have celebrated this year with many activities, including a Rice Fest, and an International Rice Conference and look with renewed confidence

to the future.

As the Guyana Rice Development Board consolidates and celebrates the achievements of the rice export industry at its first centenary, renewed efforts in building social capital, through the Rice Producers Association, Farmer Field Schools, Rice Exporters, Millers, Researchers and its local and international partners, must certainly occupy our corporate thinking and metamorphose into concrete plans and results to power the rice industry into the future.

Dindyal Permaul, B. Sc (Agri.); D.I.C (Imperial College); Ph. D. (London)

