

Full Length Research Paper

Rice marketing in Bangladesh: From the perspective of village study at Cox's Bazar district

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The paper analyzes the problems and prospects of rice marketing in Bangladesh by way of using secondary data as well as primary data. Both secondary and primary data are indicative of the fact that rice marketing in Bangladesh is marred by a wide range of problems including packaging, transporting, storage, distribution and pricing. There is a comparative advantage in the production of high yielding rice in Bangladesh but its marketing system is not suitable to the small farmers to bring fair price. Most of the respondents' opined the major causes of price hike are natural disaster, inadequate supply of food grain in the market, less production, hoarding by traders and creating artificial food crisis in the market, problems of communication system, increase of middlemen in the market to reach food grain to consumers. This study is explanatory in nature which suggests measures that can benefit both the farmers and the end users.

Key words: Agriculture, marketing, Bangladesh.

INTRODUCTION

Bangladesh is one of the less developed countries in the world, with a per capita income of about \$700 in 2010. Although the relative contribution of agriculture to GDP has fallen over time (currently 21%) the absolute contribution is still on the rise. In terms of employment, agriculture still remains to be the largest source. The economy of Bangladesh is primarily dependent on agriculture in terms of employment. About 85% of the population are directly or indirectly attached with agriculture. A lot of programs for agricultural development have been arranged in our country on the production of staple foods, especially rice and wheat. It is evident that without an efficient agricultural marketing system no program for raising production can sustain. So institution of marketing reforms is necessary. Without efficient marketing no production can create much value. Agricultural marketing involves moving an agricultural product from the farm to the consumer. Large number inter-connected activities are: planning, production, growing and harvesting, grading, packaging, transport, storage distribution and sale. Marketing has to be customer-oriented and has to provide the farmer, transporter, trader, processor etc, with a profit. Farmers in our country can take any decision on production and

marketing if they think about what to produce and how to prepare it for sale, when and where to sell, what can be done for market expansion, realizing the relative advantages and disadvantages of different methods of marketing their products, for example, contract marketing, direct marketing etc. The knowledge of agricultural marketing helps the growers to adapt to the changing new rules and regulations and to the various market development programs like Department of Agricultural Marketing (DAM); National Agricultural Policy (NAP) etc. Rice is the staple food in our country. It provides 68% of the calorie and 54% of the protein intake of an individual on an average (Karim et al., 1997). Food security at both national and individual levels is related to population, agricultural growth and also market situation.

The population of Bangladesh is growing by two million every year and may increase by another 30 million over the next 20 years. Thus, Bangladesh will require about 27.26 million tons of rice for the year 2020 (Islam and Syful, 2009). This present study aims to examine the practices and problems of rice marketing in Bangladesh with the help of available secondary data. The observations have been supplemented by a case study

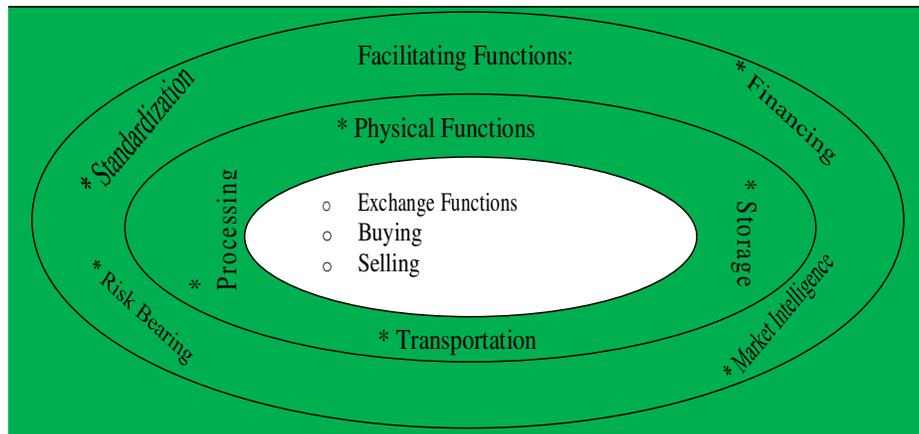


Figure 1. The functional approach of agricultural marketing system (Kohls et al., 2002).

from Chakaria, Cox's bazar, Chittagong.

THEORETICAL ISSUES AND EMPIRICAL EVIDENCE CONCERNING AGRICULTURAL MARKETING

There are several ways to approach the study of agricultural marketing. Some are purely descriptive, where others are more analytical. The major three approaches are given subsequently.

The commodity approach

This approach is product-oriented rather than marketing function-oriented. This study consists of the properties of the product, the market demand and supply position at both national and global levels, consumers' behavior in that particular product and prices at the farm, wholesale and retail levels. It may be used for further research but not enough to judge why marketing costs vary.

The institutional approach

This analysis is to study the characteristics of various middlemen and related agencies of the marketing devices.

The functional approach

Under this approach, the marketing processes are broken down into functions and the classification of functions is presented in Figure 1.

Exchange functions

This function involves activities of transferring the title of goods, where price is determined. Both the buying and

selling functions have as their primary objective, which is the negotiation of favorable terms of exchange. The buying function involves the assembling the raw products from the production areas as well as the assembling of finished products into the middlemen to meet the demands of the last consumers. The selling function consists of various activities like display of good, advertising and promotion to increase demands, proper packaging, the best marketing channel etc.

The physical functions

This involves the activities of storage, transportation and processing that change the original form of the product such as potato into potato chips, tomato into tomato sauces etc.

Facilitating functions

This help smooth out the exchange and physical functions. By the following ways it helps to go round the wheels of the marketing machine:

(a) The standardization function that involves measurements of both quality and quantity facilitates mass selling.

(b) The financing function is the use of money to carry on the various aspects of marketing. Financing may be in the form of credit or in the form of tying up the owner's capital resources.

(c) Risk-bearing function can be classified into physical risks (like destruction of the product through fire accident, cyclone, flood, cold, heat etc.) and market risks (the change in the value of a product, change of operation of rival firms).

(d) Marketing information system (MIS) is the job of collecting, collating and disseminating the large variety of data. All other activities viz storage programs, efficient

transportation service depend considerably upon accuracy, reliability and timely information. Three distinct types of information are provided to the market decision makers.

First, Recurrent information, provides information periodically (such as weekly, monthly or annual basis). Secondly, Monitoring information, which comes from external sources like journals, articles, chamber's publication, and govt. reports etc. Thirdly, Requested information, provides information in response to specific request by the marketing decision-makers. This type of information does not exist in the systems (Tull and Hawkins, 1999).

The functional approach is helpful in evaluating marketing costs. Usually retailing costs are much more than wholesaling. Moreover it is useful for understanding the differences in marketing costs of various commodities, for example, the cost of perishable product and less perishable product. Sometimes this cost differs because difficulty of transportation, storage and risk-bearing functions.

Although it is sometimes possible to eliminate the middleman, it is not possible to eliminate marketing functions. For example, farmers can take the storage, selling and transportation functions, eliminating brokers and commission men. If a group of consumers purchase food in large lots from wholesale, the process can eliminate retailer and although some retailing functions like storage standardization and transportation check cashing, price marking have to be performed. Thus, the cost of performing marketing function can be reduced, but the function cannot be eliminated from the marketing process.

METHODOLOGY

The quantitative and qualitative information required to prepare this material principally came from various reports, internal documents, agriculture census, sample survey in the year of 2010, website resources, forum, etc. Annual Reports, Agriculture Census (2008), Bangladesh Food Security Investment Forum (2010) were utilized to assess the quantity and quality of agricultural products in different regions. Using sample survey, website resources it analyzes them to examine the fluctuations of the prices of agricultural products over years and seasons in different markets in different regions. In addition consultations and interviews to collect information were held to understand the nature of marketing and flow of agricultural products and the level of integration in this marketing as well as the effect and efficiency of the market with respect to agricultural product pricing.

RESULTS AND DISCUSSION

The state of rice production in Bangladesh

Rice sector contributes one-half of the agricultural GDP and one-sixth of the national income in Bangladesh. Agricultural Census (2008) shows that out of a total

28,670 million households, the number of agriculture farm households (who are cultivating 0.05 acres or more) is 14,387 million, which is 51.33% of total households. Barisal has recorded highest percentage (65.12%) of agriculture farm followed by Khulna Division (59.09%), Rajshahi Division (55.83%), Sylhet Division (51.01%), Chittagong Division (50.11%) and Dhaka Division (43.02%). About 38% of the landless households are very poor who have inadequate income to feed themselves. The marginal people have little amount of land of their own and are involved in share-cropping. These two groups constitute about 80% of the households of the surveyed villages. The rest 17% were self-sufficient and only 3% of the households were rich (BBS, 2006). The HYVs and Hybrids rice have introduced to overcome the food deficit in the country. The chief varieties of rice in Bangladesh are Aus, Aman, Boro and IRRI. Aus, Aman and Boro production and cultivation areas are shown from the year 1971-72 to 2005-06 in Figures 2 to 10.

Figures 2 to 4 show the production of Aus, Aman and Boro rice of local and HYV from the year 1971-72 to 2005-06, respectively. It is apparent that Aus rice of local production is falling from the mid year of 1987-88 but HYV production is approximately same (maximum 1000 metric tons) from the year of independence to 2005-06.

The local production of Aman rice is falling slowly. But HYV production is increasing moderately. Whereas, Boro HYV rice production is rising rapidly and local production is going least (about 100 to 50 thousand metric tons) from the early year of independence to 2005-06. Figures 5 to 7 represent the area under Aus, Aman and Boro rice (for local and HYV) cultivation from 1971-72 to 2005-06. It is shown that Aus rice cultivation area for local is falling rapidly but HYV area is increasing gradually.

Aman rice cultivation area for local is decreasing but HYV production area is increasing but HYV production area is increasing rapidly. Whereas area under Boro rice cultivation for both local and HYV are increasing moderately but HYV production area is higher than that of local from the year of independence to 2005-06. Average yields of Aus, Aman and Boro rice (of local and HYV) from 1971-72 to 2005-06 are shown in Figures 8 to 10.

From these figures it is observed that we have got Aus rice for HYV in decreasing rate and local rice in increasing rate. Aman and Boro rice yields for HYV and local both are increasing slowly. But comparatively Boro rice yield (HYV and local) is rising more than that of Aman rice.

Boro is now the single major crop according to its production volume. It represents almost 50% of the total cereal production. Table 1 shows the distribution of Boro cultivating households by six different divisions. Where provides the information that 2.77 million households cultivated Hybrid Boro during the Boro season (February to April, 2008) out of a total 14.72 million farm households. Rajshahi Division reported the highest percentage (27.22%) and Barisal Division reported the

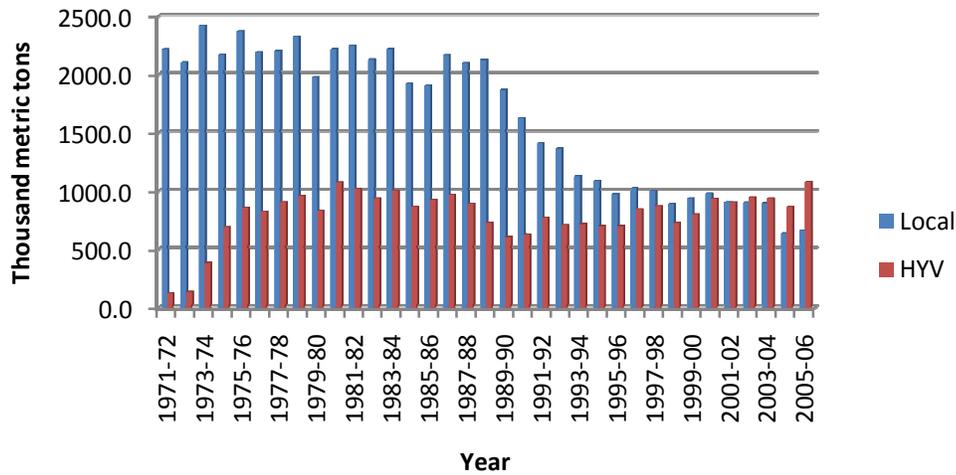


Figure 2. Production of Aus rice from 1971-72 to 2005-06.

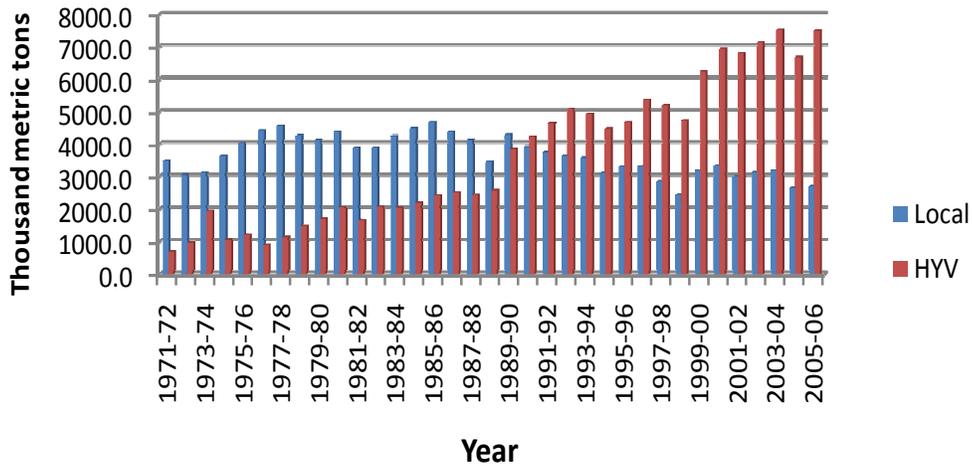


Figure 3. Production of Aman rice from 1971-72 to 2005-06.

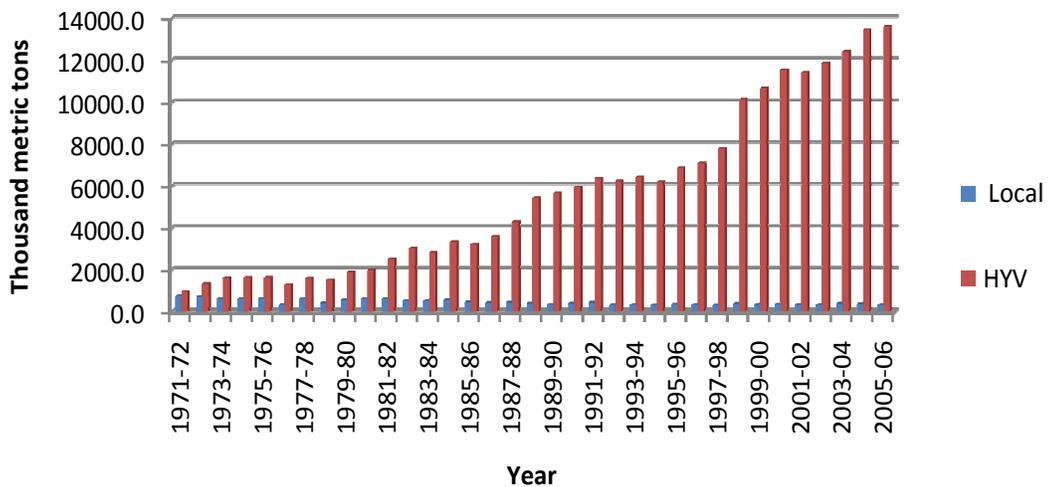


Figure 4. Production of Boro rice from 1971-72 to 2005-06.

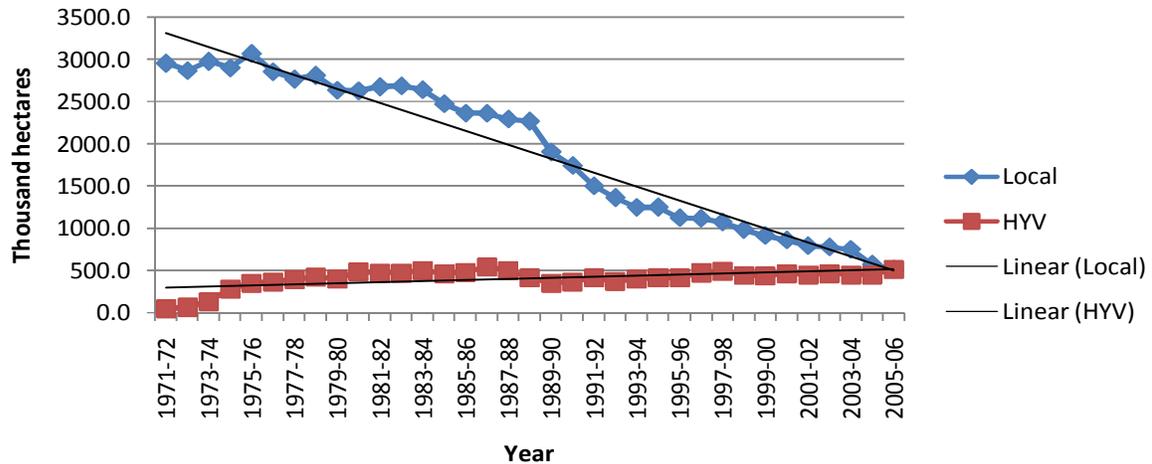


Figure 5. Area under Aus rice cultivation from 1971-72 to 2005-06.

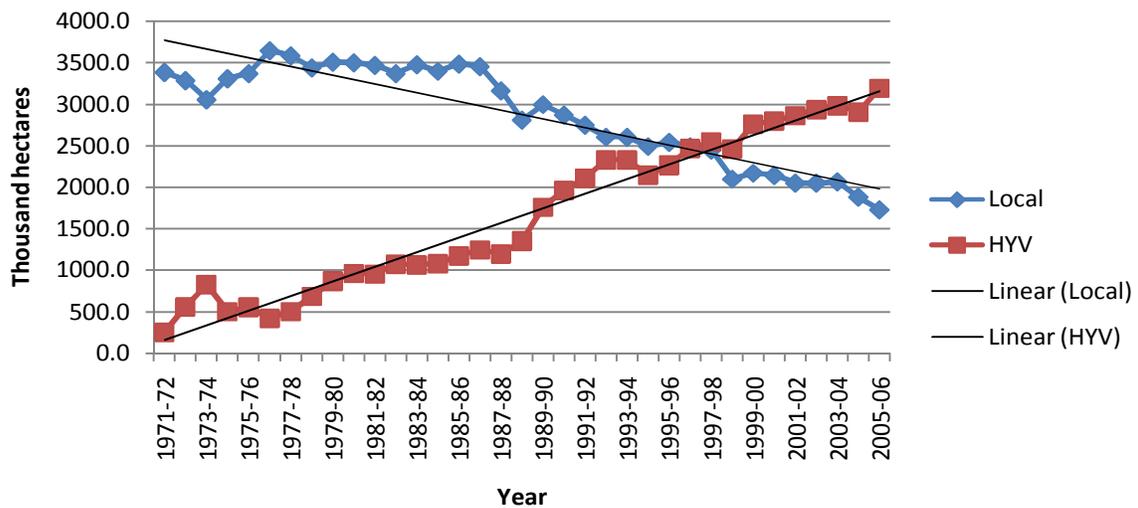


Figure 6. Area under Aman rice cultivation from 1971-72 to 2005-06.

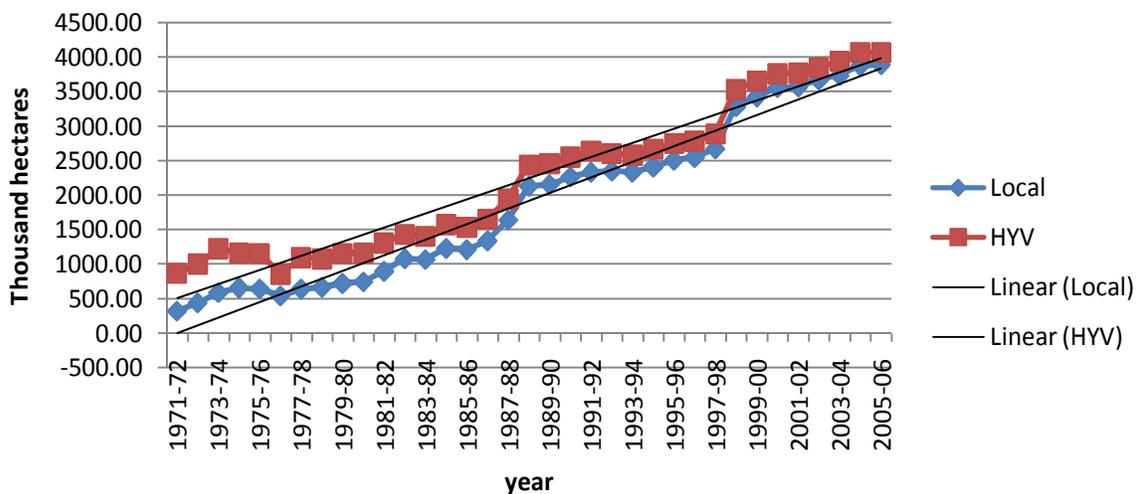


Figure 7. Area under Boro rice cultivation from 1971-72 to 2005-06

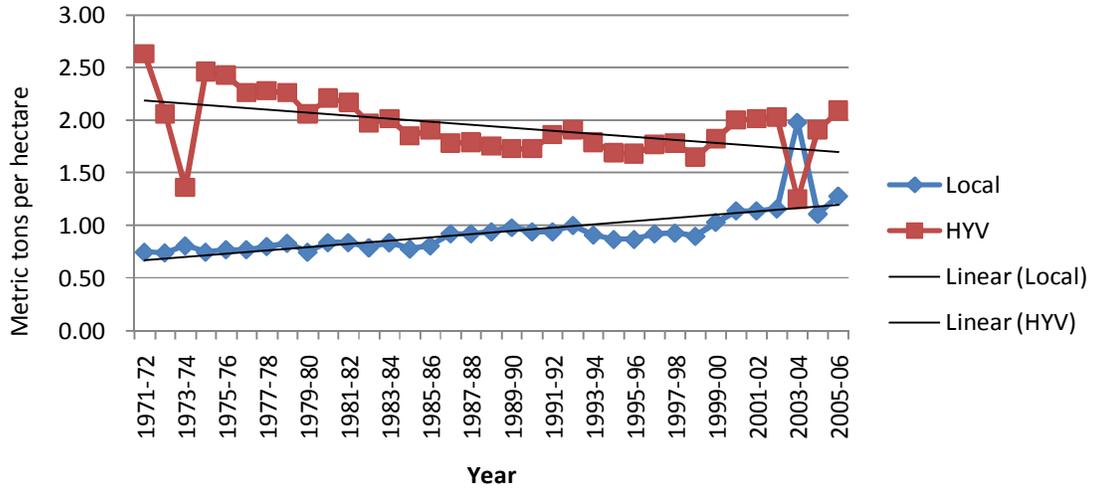


Figure 8. Average yield of Aus rice from 1971-72 to 2005-06.

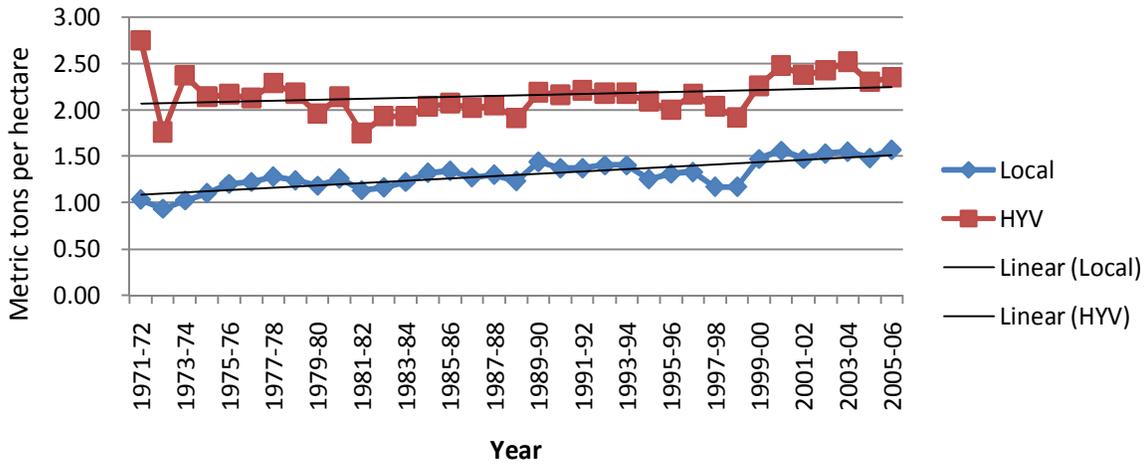


Figure 9. Average yield of Aman rice from 1971-72 to 2005-06.

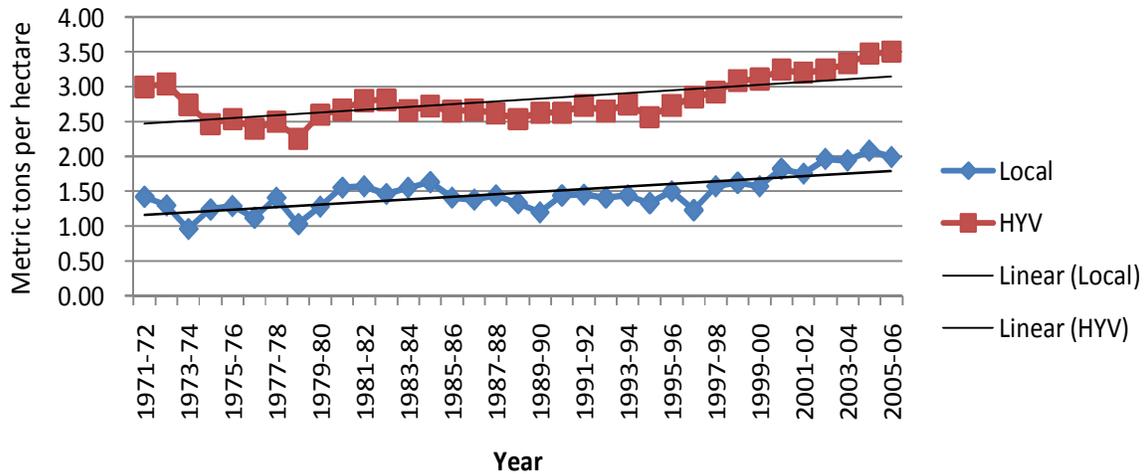


Figure 10. Average yield of Boro rice from 1971-72 to 2005-06.

Table 1. Distribution of Boro Cultivating Households by Six Divisions in 2007-2008.

Division	Total farm households ('000)	Number of Boro cultivating households (000)			Percent of Boro cultivating households		
		Total	Urban	Rural	Total	Urban	Rural
Barisal	1.126	71	2	70	6.31	0.18	6.13
Chittagong	2.449	392	6	386	16.01	0.24	15.77
Dhaka	4.060	591	20	571	14.56	0.49	14.07
Khulna	2.027	453	7	446	22.33	0.33	22.00
Rajshahi	4.273	1,163	13	1,150	27.22	0.30	26.92
Sylhet	782	104	1	103	13.32	0.13	13.17
Bangladesh	14.716	2,774	50	2,725	18.85	0.34	18.51

Source: BBS (2008).

lowest percentage (6.31%) of households with Hybrid Boro Cultivation.

Problems of rice marketing in Bangladesh

The problems of agricultural marketing from the growers' point of view are:

(1) In our country, farmers are classified into four groups. First group comprise those landlords who lease their land to other farmers for cash on yearly basis or based on yearly share cropping. The second group consists of the solvent farmers who cultivate their land and, if needful, arranges to borrow from banks. Third group do not have sufficient land to cultivate. So, they are leasing in land from others in addition to their land and needs loan for cultivation. The last group is the landless farmers who cultivate by leasing from others and have to borrow money for capital. For the lack of adequate institutional credit facilities farmers cannot purchase quality fertilizer and seeds and do not get irrigation facilities. But now government's stress on the easy accessible credit support to leasing farmers can increase

agricultural productivity.

(2) Marketing margin or price spread of agricultural product is too high due to either the high cost of marketing owing to the provision of more and better marketing services which are demanded by consumers or inefficient utilization of existing marketing facilities and the high risk involved. The difference between the farm price and the retail price is the marketing margin as shown in Figure 11 (Hoque, 2004):

(3) Farmers are not getting any benefits from increases in the price level in the rice market. Farmers have to sell their produce during harvest and post-harvest period at low prices. Though the demand for rice is always high in our country, it is highly inelastic. So, bumper crops of rice cannot increase the total revenue of the farmers by increasing price of the rice. Since these small farmers have no storage facilities they need to repay their loan or meet household expenses. So at the time of selling rice the intermediaries are obstacle to farmers in getting fair price.

(4) Continuous increases in price may be due to the massive involvement of middlemen in the marketing system. Different types of middlemen are engaged in agricultural marketing in Bangladesh. They are the beparis, farias,

wholesalers, commission agents/aratdars, contract-buyers, cold storage operators, wholesaler-retailers, assembler-wholesalers, hawkers and retailers. Field studies suggest that the distribution channels of rice are so long that they cause the price of rice to increase. Mehruna (undated) reports that the present government adopted policies that emphasize on the minimization of the problems of production and easy access of agricultural inputs to the poor farmers.

(5) Because of inadequate marketing information system, farmers cannot make decisions when planning their production and sales. Lack of information on input costs, supply and sources and even their residual effect are not well known to the farmers, where the service of MIS could help the farmers to reduce risk, increase bargaining power and make production plan.

(6) Storage facilities of rice produce for the farmers are not adequate in rural areas. As a result, farmers have to sell off their produce as soon as possible.

(7) Fluctuations in the prices of rice are one of the difficulties of agricultural marketing. The market price of rice fall after the harvest and later it increase. So, they are deprived of the correct

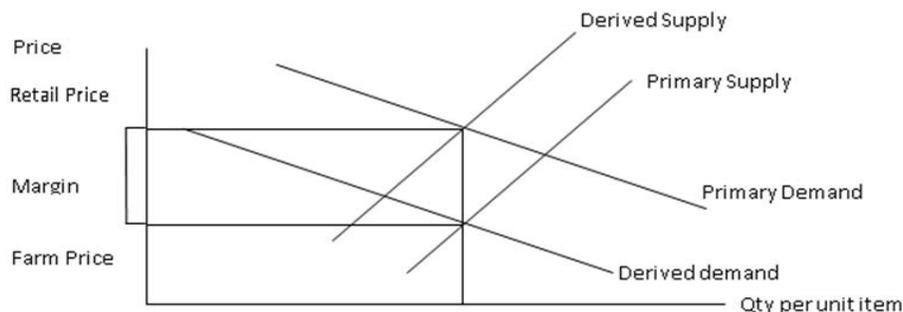


Figure 11. Margin/ price spread between two market levels (farm and retail).

revenue. Farmers then prefer substitute products like tobacco.

Analysis of rice marketing functions: Evidence from a case study

The major functions of rice marketing of the sample area at Chakaria Cox's Bazar can be summed up under the following headlines:

Sales and purchase

Rice transactions take place at different marketing stages of the sample area. It is apparent that about 80% of the growers sold their produce to Beparis and Farias at local bazars. Moreover, it has been found that about 15% of producers carry the produce directly to Aratdhars. The rest 5% of the producers sell their produce at home to local middlemen.

The price of rice appears to be determined through open bargaining between the sellers and buyers. It has been observed and also reported by the concerned persons and respondents that price variation depend mostly on the power of Aratdhars and also on supply and demand which depends on the factors of the supply. It was also observed that when there is monopsony, growers/farmers are compelled to sell at one price. Therefore it is seen that the financially weak producers, in response to low demand artificially created by middlemen, are most of the time obliged to sell their rice at a low price offered by middlemen in late working hours.

In the sample area, a Hybrid Boro grower (Kaharia Gona, Ward no. 5, Chakaria, Cox's bazar) informed that this year (2010) where his produce was sold at 23TK per kilogram to Bepari, local Boro producers (who are financially weak) sold their produce to Bepari at 17TK.

Packaging

Mainly the functions of packaging are to contain

adequately a convenient amount of the product to protect it in transit and to aid in its safe delivery to the consumer (Geodfery and Francis, 1980). The sack bag of plastic, approximately 56 × 95 cm carrying 50 kg net is the most widely adopted package for rice.

Such rice packages make the produce more perishable in the face of natural disasters.

Storage

Rice is consumed throughout the year in Bangladesh by every consumer. But it can be produced twice in a year in a particular land. So preservation is more important in the case of rice. Some go downs, space-temporary, semi-temporary or permanent; are available in Khatunganj, Chittagong, but are not available in my survey area. Some financially weak farmers opine that if government facilitates them to produce and to provide storage, farmers as well as consumers can get rid of the power of the middlemen. As a result, those farmers can increase their living standard. So, they are keenly encouraged to produce rice rather than tobacco.

Transporting

Lack of adequate and good means of transportation between the area of production and the market centers hinders the movement of farm produce and makes primary marketing costly (Rahman and Khandker, 1973). Effective transport system can play a vital role in the proper and sound distribution of rice in sample area. The growers and trader respondents inform that 80 per cent of the rice is carried by trucks, 15 per cent by trains and 5 per cent by country-made boats. From the survey, it is revealed that lack of adequate transport facilities hinders the well marketing mechanism of rice in Chittagong to a great extent.

Distribution channel

A distribution channel is the course taken by which the

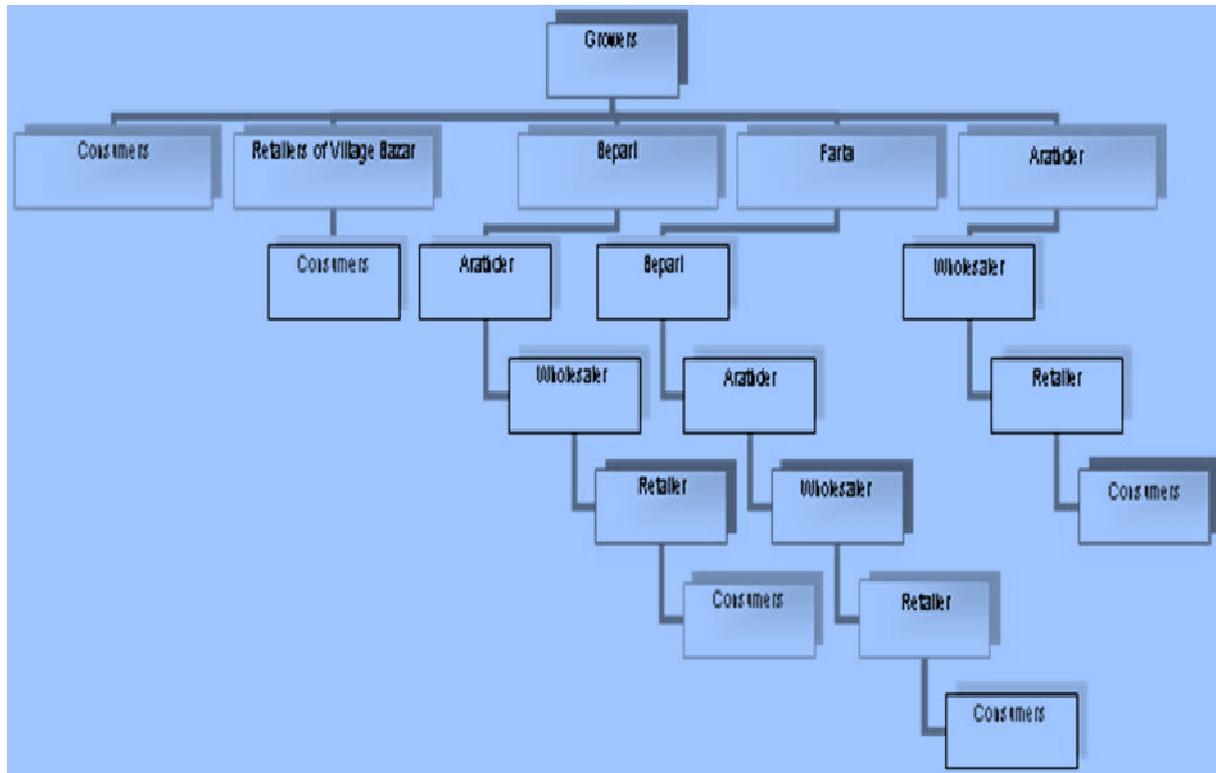


Figure 12. Channel of Distribution of Rice (Source- Survey study).

title to the goods move from producer to consumer (Stanton,1967). There are five different channels of distribution that were found in the course of this study in sample areas are presented in Figure 12. Rice passes from producers to consumers through different channels. The simple and direct channel is producer to consumer as seen in the left side of distribution channel (Figure 12). Other three channels are indirect in which cases different types of middlemen like Farias, Beparis, Arathders, wholesalers and retailers are working. A finding and my observation reveals that less than 5% of the producers reach the consumers through direct channel and rest through the indirect channel.

Price spread at the producer's level

The rise in price may be attributed to rise in population, falling land resources, ecological imbalance, over industrialization, neglect of farming, cultivating plants for bio-fuels in huge areas of farm holdings instead of cultivating crops for food, over consumption by the rich, hoarding and black marketing, rise in income levels. Climatic disorders such as drought, flood, industrial pollution etc. are also responsible.

In agricultural marketing, it has been observed that the growers are often deprived of fair price for their crop production. There is large price spread between the price

paid by the ultimate consumers/users and the price received by the growers. The middlemen are obtaining maximum benefit from the marketing operation and so the producers are suffering. This problem of price spread is very significant in case of rice marketing. Table 2 provides the local Boro and Hybrid Boro produced, costs of production, sales prices to Bepari (per kg), their revenues and profits by two growers at Chakaria, Cox's bazaar.

From Table 2, it can be seen that a local Boro grower can produce 480 kg Rice in 0.4 acres (1 kani), if he does not get any facilities (subsidies) from etc. The cost of production was TK5000. He sold it to Bepari at TK17/kg and at the end of the production year his net profit stood at only TK4160. Whereas, in the sample area a Hybrid Boro grower produced 1200 kg in the same amount of land. He sold it at TK23/kg to Bepari. At the time of field survey, it is known that if government provides facilities, one can produce 2400 kg in the same area of land. Thus, profit will be increased from TK16600 to TK44200. From government or face any natural disasters, flood, Table 3, it is apparent that the retail price of Hybrid Boro was TK33 to TK35 and the local Boro was TK22 to TK23 at Chittagong.

The Hybrid grower opined that storage procurement from government can help poor farmers not to sell their produce at lower price thereby; the profit as well as their living standard will increase.

Table 2. Hybrid and Local Boro production, costs, revenue and profit.

Rice variety	Rice production (per 0.4 acre) (kg)	Production cost (TK)	Sale to Bepari (per kg)	Total revenue (TK)	Profit (TK)
Local Boro	480	5000	17	8160 + 1000 (receive from landowner as irrigation)	4.160
Hybrid Boro	1200	12000	23	27,600 + 1000 (receive from landowner as irrigation)	16.600

(Source- Survey).

Table 3. Retail prices of Boro-Pajam and Boro-Local on Friday, 05 November 2010 at Chittagong Division.

Rice variety	Division	District	Upazilla	Market	Minimum price/ kg	Maximum price/ kg	Average price/ kg
Boro- Pajam	Chittagong	Comilla	Comilla Sadar	Comilla sadar	28	30	29
	Chittagong	Bandarban	Bandarban	Bandarban	33	35	34
Boro- Local	Chittagong	Rangamati	Rangamati sadar	Rangamati sadar	22	23	22

Source- GOB, Ministry of Agriculture, Bangladesh.

Conclusion

Rice has all the potential to become a profitable crop if proper initiative is taken to eradicate the marketing problems. Ignorance and orthodox mentality are destroying the current domestic market compared to its high production capacity. This sector can be developed through following strategies:

- Infrastructural facilities like transport, electricity, water supply should be ensured.
- Prices of rice should be fixed by government agencies and that govt. can make direct purchase from the farmers at the support prices. These purchases can be sold off by the government at reasonable price through the public distribution system.
- Developing the system of packaging, grading, advertising, marketing cost and marketing channel etc.
- Loans from banks and other financial institutions should be made available to growers so that they can go for marketing of rice directly based on their own capital.
- Up-to-date information on prices and other market factors should be made available so that farmers can negotiate with traders and also facilitate spatial distribution of products from rural areas to towns and between markets.
- Narrow down the price spread between the producer and the consumer. Finally, ensure remunerative price to the producer of agricultural products. There is scope for improvement in rice marketing system in the survey area in particular and Bangladesh in general. Improved infra-

structure and efficient marketing system through solving the existing problems of rice marketing, Bangladesh can benefit it's the farmers as well as the end users enormously.

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