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Rice Farmers' Marketing Efficiency in Southwestern Part of Bangladesh

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Abstract: Efficient rice marketing is one of the most important factors in determining the rural economy of Bangladesh. This study focuses on the standard of living of rice farmers, production structure, rice selling, marketing channel, rice prices, profit by intermediaries, marketing efficiency and farmers' attitudes towards marketing. The study is based on data collected through a survey of 33 farmers and 25 intermediaries carried out during July to August 2003 in Jhikargacha Upazila in Jessore district, south-western part of Bangladesh. In the surveyed area six types of middlemen and eighteen types of major marketing channels were identified. The study found that 27 (82%) farmers sold exclusively unhusked rice and only 6 (18%) farmers sold partially husked rice. The quantity of unhusked rice sold to wholesalers of unhusked rice, stockists, huskers and village merchants were 32, 19, 27 and 14%, respectively. Although, among all eighteen channels husked rice selling to retailers of husked rice was observed to be the best channel, only 3% of unhusked rice was converted to husked rice and sold through this channel. Husked rice sold through wholesalers of husked rice was also found to be a comparatively efficient channel, but only 5% of unhusked rice was converted to husked rice and sold through this channel. The study found that the marketing of rice in the surveyed area was not efficient. It is argued that because of the limits on alternative ways of improving the conditions of the farmers and as rice is one of the main sources of income, its efficient marketing is essential for increasing their income and that will ultimately be helpful for improving the living standard.

Key words: Rice, farmer, marketing channel, marketing efficiency, standard of living

INTRODUCTION

Among cereals, rice undoubtedly constitutes the largest and most important sector of Bangladesh agriculture. At present, rice covers 75% of the cultivated land and produces 74% of produce among all crops. The major portion of rice was consumed in producers' households in the past, but after the green revolution the marketable surplus has progressively increased. Hayami (1999) emphasized that 'the efficiency in rice marketing has become a more important determinant of both consumers' living cost and producers' income.' During and after the green revolution, the rice production sector gained much more importance than rice marketing. As a result, the yield rate surprisingly increased, but return is still lower than for other crops. Bangladesh has a comparative advantage in the production of high yielding rice; the marketing system is not suitable for getting a fair price for the farmers (Rahman *et al*., 2005). Mahmoud and Shively (2004) said 'Economic returns for rice production, calculated at export parity prices, are much lower than for many alternative crops, including vegetables.

Marketing, as a discipline, has played an important role in the development of industrialized nations. Until recently, however, its potential as a source of development in the Third World has been largely ignored (Rahman *et al*., 2005). There is no doubt that marketing has a role to play in the economic development of the LDCs (Hosley and Wee, 1988; William and Elizabeth, 1999). The most significant characteristic of a sound marketing system lies in the distribution channel. The marketing channels used by the farmers are not always performing at the same efficiency in terms of their returns i.e., different channels have different returns. Socio economic conditions, disorganized conditions of producer, nature of product, lack of infrastructural facilities, marketing complexity, etc. create obstacles against the use of efficient channels. Using the efficient channel reduces the distance between the farmer and the final consumer thereby reducing middlemen's share in the channel that ultimately increase farmer's share on the consumer's price (Rahman *et al*., 2005). Marketing is a strong instrument whereby per capita income could be raised leading to a higher standard of living. Using an

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efficient marketing channel ensures the highest price of the product, which leads to raising income (Saediman *et al*., 2004) and thus ultimately improves living conditions.

Populations below the nation's upper poverty line in Bangladesh in rural and urban areas were 53 and 36.6% respectively in 2000 (WB, 2002). In an international comparison in the year 2000, 82.8% of the population was earning less than $ 2 per day (WB, 2005). As the income level of most of the population is low, so their standard of living is not high. Due to the limits on alternative ways of improving the living conditions and as rice is one of the main sources of income for farmers in the surveyed area, it's efficient marketing is considered as an important instrument in contributing more money for them and that will be helpful to improve the standard of living. However, the objectives of this paper are: (1) to identify the major marketing channels and to measure the marketing efficiency in each channel, from the viewpoints of rice farmers' earnings and (2) on the basis of findings, to make recommendations.

MATERIALS AND METHODS

A survey was conducted using the interview during July to August 2003, for the period of 2002, in one village (Azampur) of Jhikargacha Upazila in the Jessore district. The Jessore district, in the southwestern part of Bangladesh, produces rice, jute, wheat, potatoes, flowers, vegetables, etc. In the study, 33 rice farmers were randomly selected as respondents. The selected village is 10 km away from Jhikargacha Upazila headquarters. By observing the flow of rice, the various prevalent marketing channels were identified. The survey also included a total of 25 intermediaries; five village merchants, eight wholesalers of unhusked rice, three stockists, two huskers, three wholesalers of husked rice and four retailers of husked rice.

This area was selected for study for two major reasons. First, the area bears the common characteristics of Jessore district, comprised of different types of farmers and producing rice as the main crop. Second, so far no attempt has been made to evaluate the marketing efficiency of these rice farmers by their output. The topology of the study area is flat; High Yielding Variety (HYV) rice is produced for both consumption and cash. The research was confined to data collection for the year 2002 in the *boro* season; the rice-selling period started from mid-April and continues up to mid-October. The study categorizes the rice into two types: unhusked (paddy) and husked (rice i.e., finished product of paddy). In local language, unhusked and husked rice are called *dhan* and *chal*, respectively. Mean value has been used to calculate selling price, margin, cost and profit. The farmers share and marketing efficiency have been calculated respectively by using the following formula (Ntengua and Steve, 1996; Saediman *et al*., 2004).

$$\% \text{ of farmers share} = \frac{\text{Price recevied by the farmer}}{\text{Price paid by the consumer}} \times 100$$

$$\text{Marketing efficiency} = \frac{\text{Marketing margin+Farmers share}}{\text{Marketing margin}} \times 100$$

To ascertain the attitudes for marketing phenomenon, the questionnaire also contained a number of attitudinal statements which the respondents were asked to indicate the extent to which they agreed or disagreed with. The adopted five-point Likert scale is: 1 = Strongly disagree, 2 = Disagree, 3 = No opinion/neutral, 4 = Agree, 5 = Strongly agree.

RESULTS AND DISCUSSION

Standard of living to farmers: The standard of living is the capacity of people to spend for food, housing, clothing, education, medicine and the other amenities of life. When people can spend adequately on food, housing, clothing, education, etc. and lead a comfortable life, it can be said that their standard of living is high (Rahman *et al*., 2005). The standard of living of farmers here were evaluated in terms of housing and toilet conditions (Whether it was bad or good), household amenities (availability of television, refrigerator and telephone), the availability of an electrical power supply, medical facilities and non school-going children (Rahman *et al*., 2005). Houses built with mud, bamboo, straw and tile were considered as bad. To measure the housing conditions as to whether it was good or bad, only living rooms were considered. Brick built houses were considered as good. To consider the toilet conditions, brick built sanitary toilets were considered as good.

Considering the above-mentioned criteria, in surveyed areas (Table 1), houses are built from natural building materials: mud, bamboo, straw and tile, those numbered 70% of farmers. There was no hygienic and good conditioned toilet among 79% of farmers. Farmers having no electricity were accounted for at 45%. Actually, electricity is not only expensive but also unavailable in rural areas. In order to judge the living conditions of farmers, it was necessary to consider the various household utility items used. Farmers that had no television, radio, telephone and refrigerator were

Table 1: Standard of living

Parameters	N	(%)
Bad housing condition	23	70
Bad toilet condition	26	79
Have no electricity	15	45
Have no television	21	64
Have no radio	8	24
Have no telephone	33	100
Have no refrigerator	32	97
Have no medical facilities	15	45
Non school going children	7	21

Source: Field survey, 2003, N-Number of farmer, Total farmer-33

accounted for at 64, 24, 100 and 97% of farmers, respectively. Medical facilities in Bangladesh are very inadequate to provide minimum basic treatment for its population. The study found that in the surveyed area, 45% of the farmers had no adequate medical facilities and non-school going children were found in 21% of farmers.

Production structure: Bangladesh is one of the most densely populated countries on earth and rapid population growth and a tradition of bequeathing land to all heirs has led to the fragmentation of holdings. Double cropping is the norm and many farmers grow as many as three crops a year. Individual farming is one of the most important characteristics of Bangladesh agriculture (Rahman and Takeda, 2005). The average cultivated farm size in Bangladesh is 1.50 acres (BBS, 2005). The Information on the Agriculture Census, 1996 conducted by the Bangladesh Bureau of Statistics published in 2002 revealed that 10.18% of farm households in rural areas are purely landless. Sharecropping is the most common form of tenancy agreement. Insecure land tenure not only acts as a constraint to investment, but also deprives farmers of access to formal credit, inputs and other institutional services required for improved agricultural practices. As a result, farmers are often forced to continue traditional agricultural practices (Golam and Gopal, 2004). The ready availability of large numbers of poor laborers and the fragmented character of many landholdings has perpetuated a labor-intensive style of agriculture and unequal tenancy relations. The study found that there were no group farming or farmers' organizations in the surveyed area and only the males conducted all farming activities. Among 33 farmers, 8 (24%) had tenancy relationships in terms of sharecropping. The mean value of land size for rice cultivation was at the highest, measured at 1.75 acres, as shown in Table 2.

Rice selling: Table 3 shows rice output and disposal in 2002 in the surveyed area. The mean output of *boro* rice of the 33 farmers was 3717 kg. Eight farmers used tenant land and for that they paid 451 kg of rice to the landowners. Rice is the staple food, followed by the wheat. However, all 33 farmers consumed 588 kg of rice. For further cultivation and other purposes, 28 farmers kept/disposed of 182 kg. Here, the other purposes that were included with seeds could be described as a contribution by the farmer to the social welfare, free donation to the poor relatives and wastage. A great portion of the produced rice was sold by the farmers (2865 kg), which was 77% of all produce.

Table 2: Land distribution for cultivation (acre)

Parameters	N	Mean	Std. Dev.
Total land	33	3.32	1.58
Used land	33	3.27	1.56
Rice	33	1.75	0.97
Wheat	10	0.67	0.29
Jute	8	0.71	0.26
Potato	6	0.93	0.69
Pulses	4	0.35	0.12
Spices	4	0.40	0.20
Vegetables	8	0.54	0.30
Other agricultural crops	18	0.78	0.55
Forest	7	0.50	0.24
Pond	6	0.58	0.38
Permanent crops	7	0.53	0.16

Source: Field survey, 2003

Table 3: Rice output and disposal (kg)

Parameters	N	Mean	Std. Dev.
Output	33	3717	2230
Share to landowner	8	451	209
Consume	33	588	170
Seeds and other	28	182	109
Sale	33	2865	2142

Source: Field survey, 2003

Marketing channel: Rice producers suffer from a number of difficulties, which reduce their bargaining power; long chains of intermediaries operating between the primary producer and the ultimate consumer appropriate the major share of the consumer's price (Rahman *et al*., 2005). The intermediaries make a large portion of the consumer's expenditures. The multiplicity of intermediaries affects the efficiency of agricultural marketing in Bangladesh. There is no doubt that in recent years, commercial activities have increased all over Bangladesh. But increased commercial activity is not always a sign of increasing income or wealth (Rahman *et al*., 2005). Such views emphasize the importance of protecting farmer interests against powerful merchants, the need to reduce the risks in agricultural production through price stabilization and to protect rural livelihoods and food security at both micro- and macro-levels. In rice marketing, the marketing channels are the chain of intermediaries through which rice moves from farmers to consumers. The marketing channel of rice in the surveyed area is shown in Fig. 1.

According to the Fig. 1 there were six types of intermediaries involved in the marketing channel in selling

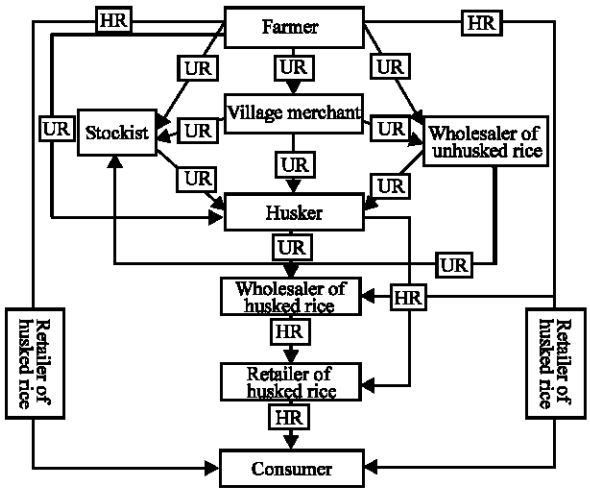

Fig. 1: Rice marketing channel in the surveyed area UR-Unhusked rice, HR-Husked rice

unhusked and husked rice in the surveyed areas: Stockists, village merchants, huskers, wholesalers of unhusked rice, wholesalers of husked rice and retailers of husked rice. In the local language, the wholesalers of unhusked rice and wholesalers of husked rice are called *dhan-er arathdar* and *chal-er arathdar*, respectively. The stockists purchased the unhusked rice from farmers, village merchants and wholesaler of unhusked rice. They sold the product to huskers. Village merchants were observed in purchasing unhusked rice from farmers directly, selling it to three types of intermediaries: stockists, huskers and wholesalers of unhusked rice. The huskers purchased the unhusked rice from farmers, stockists, village merchants and wholesalers of unhusked rice. They husked the unhusked rice and sold it to two types of intermediaries: wholesalers of husked rice and retailer of husked rice. Wholesalers of unhusked rice purchased the rice from two sources: farmers and village merchants and sold it to huskers and stockists. Wholesalers of husked rice bought the rice from huskers and farmers and sold it to retailers of husked rice. Retailers of husked rice in the marketing channel purchased the husked rice from huskers, farmers and wholesalers of husked rice and sold it to final consumers. In the case of husked rice selling, in the surveyed areas it was found that farmers could easily turn the unhusked rice into husked by paying a certain amount of money to huskers. Huskers took unhusked rice from farmers, boiled, dried and turned it into husked rice and returned it to the farmer.

Table 4 shows 13, 21, 14, 17, 5 and 4 farmers respectively sold their rice to a village merchant,

Table 4: Proportion of rice sold to intermediaries (kg)

Intermediary	N	Mean	Std. Dev.
Village merchant	13	990	627
Wholesaler of unhusked rice	21	1395	1236
Stockist	14	1307	1082
Husker	17	1519	957
Wholesaler of husked rice	5	991	572
Retailer of husked rice	4	822	419

Source: Field survey, 2003

wholesaler of unhusked rice, stockist, husker, wholesaler of husked rice and retailer of husked rice. Among 33 farmers, 27 (82%) of them sold exclusively unhusked rice; only 6 (18%) farmers sold both husked and unhusked rice. The quantity of unhusked rice sold to village merchants, wholesalers of unhusked rice, stockists and huskers were 14, 31, 19 and 27%, respectively. Husking the unhusked rice and selling it to the wholesalers and retailers of husked rice accounted for 5 and 3% in total rice sold, respectively. It was found that few farmers had a wide number of options to use any kind of channel to sell their product. However, on the basis of Fig. 1, eighteen types of marketing channels were identified as described below.

Types of marketing channels

1. Farmer-Husker-Wholesaler of husked rice-Retailer of husked rice-Consumer
2. Farmer-Husker-Retailer of husked rice-Consumer
3. Farmer-Stockist-Husker-Wholesaler of husked rice-Retailer of husked rice-Consumer
4. Farmer-Stockist-Husker-Retailer of husked rice-Consumer
5. Farmer-Village merchant-Stockist-Husker-Wholesaler of husked rice-Retailer of husked rice-Consumer
6. Farmer-Village merchant-Stockist-Husker-Retailer of husked rice-Consumer
7. Farmer-Village merchant-Husker-Wholesaler of husked rice-Retailer of husked rice-Consumer
8. Farmer-Village merchant-Husker-Retailer of husked rice-Consumer
9. Farmer-Village merchant-Wholesaler of unhusked rice-Husker-Wholesaler of husked rice-Retailer of husked rice-Consumer
10. Farmer-Village merchant-Wholesaler of unhusked rice-Husker-Retailer of husked rice-Consumer
11. Farmer-Village merchant-Wholesaler of unhusked rice-Stockist-Husker-Wholesaler of husked rice-Retailer of husked rice-Consumer
12. Farmer-Village merchant-Wholesaler of unhusked rice-Stockist-Husker-Retailer of husked rice-Consumer
13. Farmer-Wholesaler of unhusked rice-Husker-Wholesaler of husked rice-Retailer of husked rice-Consumer

14. Farmer-Wholesaler of unhusked rice-Husker-Retailer of husked rice-Consumer
15. Farmer-Wholesaler of unhusked rice-Stockist-Husker-Wholesaler of husked rice-Retailer of husked rice-Consumer
16. Farmer-Wholesaler of unhusked rice-Stockist-Husker-Retailer of husked rice-Consumer
17. Farmer-Wholesaler of husked rice-Retailer of husked rice-Consumer
18. Farmer-Retailer of husked rice-Consumer

Rice prices: In the channels, when the farmers sold 100 kg of unhusked rice (*dhan*) to huskers, it was turned into 67 kg of husked rice (*chal*) by them. When the farmers husked their own product for each 100 kg of unhusked rice, they also got the same amount of husked rice (67 kg). The prices of rice vary widely for different qualities. Most of the farmers cultivated course *boro* rice (BRRI 26), so for the sake of simplification, the study calculation is limited to the case of course rice, which was sold to different types of intermediaries at different prices. The prices received by farmer from different intermediaries were calculated after deducting the marketing cost. Table 5 shows that when the farmers sold their unhusked rice to four types of intermediaries, they got four different prices, i.e., Tk. 662, 683, 656 and 682 from husker, stockist, village merchant and wholesaler of unhusked rice, respectively. When the same farmers sold the husked rice, the price would be higher than for unhusked rice. Selling the husked rice, the farmers got two different prices from two different intermediaries i.e., Tk. 893 and 975 from the wholesalers of husked rice and the retailers of husked rice, respectively.

Table 5: Rice prices by various marketing agents (unhusked 100 kg, husked 67 kg)

Seller	Buyer	Place of sale	Price (Tk)
Farmer	* Husker	HC	662
	* Stockist	LM	683
	* Village merchant	FH	656
	* Wholesaler of unhusked rice	LM	682
	** Wholesaler of husked rice	LM	892
	** Retailer of husked rice	LM	975
Husker	** Wholesaler of husked rice	HC	918
	** Retailer of husked rice	HC	947
Stockist	* Husker	LM	764
Village merchant	* Stockist	LM	682
	* Husker	HC	672
	* Wholesaler of unhusked rice	LM	680
Wholesaler of unhusked rice	* Husker	LM	719
	* Stockist	LM	720
Wholesaler of husked rice	** Retailer of husked rice	LM	982
Retailer of husked rice	** Consumer	LM	1064

Source: Field survey, 2003, HC-Husking Centre, LM-Local Market, FH-Farmer's House, *Indicates dealing with unhusked rice, **Indicates dealing with husked rice. US $ 1 = Tk. 58.40

The prices received by different intermediaries were calculated including marketing margin. Huskers in the channel husked the rice and sold it at Tk. 918 and 947 to the wholesalers of husked rice and retailers of husked rice, respectively. Stockist, who sold unhusked rice, received Tk. 764 from the huskers. The village merchants sold the unhusked rice to the stockists, huskers and wholesalers of unhusked rice and received Tk. 682, 672 and 680, respectively. The wholesalers of unhusked rice received the price Tk. 719 and 720 from huskers and stockists, respectively. Both the wholesalers of husked rice and retailers of husked rice, who were dealing with the husked rice as the nature of their business, received Tk 982 and 1064 from the retailers of husked rice and consumer, respectively.

Profit by different intermediaries: Profit is obtained by subtracting the imputed value of the operator's labor from the income, which supposedly includes returns to operators' owned capital and entrepreneurship (Hayami, 1999). However, profit is calculated here by subtracting the cost from marketing margin. Table 6 shows that different types of marketing agents had different amount of profit; it depends upon the seller and buyer of the product. The study found that huskers got the highest amount (Tk. 218) of profit when they purchased the raw

Table 6: Profit by different intermediaries

Intermediary	Marketing chain	Tk. Margin	Cost	Profit
Husker	Farmer-Wholesaler of husked rice	256	67	189
	Farmer-Retailer of husked rice	285	67	218
	Stockist-Wholesaler of husked rice	154	67	87
	Stockist-Retailer of husked rice	183	67	116
	Village merchant-Wholesaler of husked rice	246	67	179
	Village merchant-Retailer of husked rice	275	67	208
	Wholesaler of unhusked rice-Wholesaler of husked rice	199	67	132
	Wholesaler of unhusked rice-Retailer of husked rice	288	67	161
Stockist	Farmer-Husker	81	22	59
	Village merchant-Husker	82	22	60
	Wholesaler of unhusked rice-Husker	44	22	22
Village merchant	Farmer-Stockist	26	12	14
	Farmer-Husker	16	12	4
	Farmer-wholesaler of unhusked rice	24	12	12
Wholesaler of unhusked rice	Village merchant-Husker	39	14	25
	Village merchant-Stockist	40	14	26
	Farmer-Husker	37	14	23
	Farmer-Stockist	38	14	24
Wholesaler of husked rice	Husker-Retailer of husked rice	64	17	47
	Farmer-Retailer of husked rice	90	17	73
Retailer of husked rice	Wholesaler of husked rice-Consumer	81	31	50
	Husker-Consumer	117	31	86
	Farmer-Consumer	89	31	58

Source: Field survey, 2003

goods (paddy) from farmers and after husking sold them to retailers of husked rice. Stockists in the channel had the highest amount (Tk. 60) of profit when they purchased the product from the village merchants and sold them to huskers. Village merchants purchased the product only from farmers and sold them to three types of intermediaries. They got the highest amount of profit (Tk. 14) from stockists. Wholesalers of unhusked rice had almost the same amount of profit. However, they had the highest amount from stockists (Tk. 26). Wholesalers of husked rice had the highest amount (Tk. 73) of profit when they purchased the husked rice from the farmers and sold it to retailers of husked rice. The retailers of husked rice got the highest amount of profit, accounted (Tk. 86), when they purchased the husked rice from huskers and sold it to consumers.

Marketing efficiency: Efficiency in rice marketing is the most frequently used measure of market performance. Improved efficiency is the common goal of farmers; rice marketing firms, consumers and society. It is a commonplace notion that higher efficiency means better performance whereas declining efficiency denotes poor performance (Kohls and Uhl, 1980). Marketing efficiency is defined, as the movement of goods from producers to consumers at the lowest cost consistent with the provision of the services consumers desire. Consumers would see marketing efficiency as the provision of high quality products at the lowest possible price. Yet too high a price for the farmer would limit sales to consumers and too low a price would discourage the production of future supplies. The satisfaction of consumer requirements at the lowest possible cost is linked with the maintenance of a high volume of farm output (Abbott and Makeham, 1981). From the farmers' point of view, to sale their products at the highest possible price would be efficient marketing (Abbott and Makeham, 1981). According to Abbott and Makeham (1981), marketing efficiency can be measured by analyzing the price received by the farmers and the service provided by them. Kohls and Uhl (1980) said, "Marketing efficiency is measured as a ratio of output to input." However, here the study would only like to examine the farmers' marketing efficiency on the basis of price received by them as part of the consumers' price as mentioned earlier in methodology.

Table 7 shows the marketing cost, profit, marketing margin, farmers' share and marketing efficiency in each channel. The marketing efficiency from the viewpoint of farmers' earnings, the channels from 1 to 16 show almost the same efficiency. The most efficient channel was 18 where the marketing efficiency was found to be 12.5, which indicated the farmers' share on consumers' price was 92%, followed by the channel 17, where the efficiency was found to be 6.25, which indicated the farmers' share of consumers' price was 84%. The study revealed that if the farmer sold the husked rice to retailers of husked rice, he would get the highest share of the consumers' price.

Table 7: Marketing efficiency

Marketing channel	Marketing cost (%)	Profit (%)	Marketing margin (%)	Farmers' share (%)	Marketing efficiency
Channel 1	11	27	38	62	2.63
Channel 2	9	29	38	62	2.63
Channel 3	13	23	36	64	2.78
Channel 4	11	25	36	64	3.78
Channel 5	14	24	38	62	2.63
Channel 6	12	26	38	62	2.63
Channel 7	12	26	38	62	2.63
Channel 8	10	28	38	62	2.63
Channel 9	13	25	38	62	2.63
Channel 10	12	26	38	62	2.63
Channel 11	15	23	38	62	2.63
Channel 12	14	24	38	62	2.63
Channel 13	12	24	36	64	2.78
Channel 14	11	25	36	64	2.78
Channel 15	14	22	36	64	2.78
Channel 16	13	23	36	64	2.78
Channel 17	5	11	16	84	6.25
Channel 18	3	5	8	92	12.5

Source: Field survey, 2003

Table 8: Farmer's attitudes towards marketing

Statement	N	Mean	Std.Dev.
Exchange phenomenon:			
Sold the unhusked rice for maintaining livelihood	33	4.33	0.85
Sold the unhusked rice for paying my debt	33	4.19	0.92
Have oral agreement with the money lender to sell the unhusked rice	33	3.61	1.27
Husked rice can comparatively earn more money than husked rice	33	4.00	1.17
Husked rice selling is comparatively difficult than unhusked rice	33	2.91	1.31
Physical phenomenon:			
Have available storage faculties before marketing	33	2.00	0.66
Have available transportation facilities to carry the product to market.	33	4.00	0.97
Have available polishing facilities	33	4.24	0.61
Facilitating phenomenon:			
Have sufficient information on local market	33	3.55	0.67
Market information is gathered by myself	33	3.79	0.82
Have organized farmers' market to sell the product	33	1.00	-
General phenomenon:			
I can sell my product to any type of intermediary	33	2.82	1.31
Selling price is fixed by mutual understanding with intermediary	33	2.15	1.12
I have stable price from intermediaries	33	2.15	0.57
Sold the product to government buying center	33	1.00	-
Government price is higher than intermediaries price	24[a]	3.96	0.75

[a]Nine farmers among 33 could not answer regarding selling the product to govt. buying center due to not having sufficient knowledge on government buying center

Farmers' attitudes towards marketing: The phenomenon included in the Table 8: exchange, physical and facilitating were the adaptations of the marketing functions used by Kohls and Uhl (1980); Cramer and Jensen (1994). The general phenomenon and under it's statements were

adapted in accordance with the practical situation in the surveyed areas. These phenomenons reveal the problems and prospects of rice marketing in the area. The table shows the highest (4.33) mean value, listed under 'sold the unhusked rice for maintaining livelihood. The 2nd highest (4.24) mean value is listed under 'have available husking facilities'. 'Sold the unhusked rice for paying my debt' is found to be the third highest (4.19). Many of them had oral agreements with the moneylenders to sell him the raw product immediately after harvesting. Most farmers agreed that husked rice could comparatively earn more money than unhusked rice, although some believed that it was a bit difficult. The difficulty persists due to the poor socio economic conditions, individual farming and marketing tradition, small amount of marketable surplus, inadequate marketing facilities, price fluctuation, etc. In explaining the role of alternative channel for earning more money from the same product in Jessore district in Bangladesh, Rahman *et al.* (2005) found that when farmer sold the husked rice instead of unhusked rice, their income was uplifted by 30% but due to poor socio economic conditions, most of them could not sell husked rice using alternative marketing channel. Mean value 2.00, regarding the storage, indicates that farmers had not adequate storage facilities. To carry the product to the local market for selling, most farmers agreed that they had available transportation facilities. Most farmers had sufficient market information and they collected the information by their own efforts. It was surprising that when the farmers were asked whether they had organized farmers' markets and whether they sold their product to government buying center, all respondents replied 'no'. That figured in the table with a mean value of 1.00, although many of the respondents agreed that 'government prices are higher than intermediaries'.

CONCLUSIONS

The study reveals the countless number of intermediaries involved in the procurement of rice from farmers, as illustrated by 25 buyers operating in a small village with only 33 rice farmers with an average 2865 kg of rice. Entry to the rice collection business is open to virtually any villagers. Farmers' earnings depended upon the nature of the rice, whether it was husked or unhusked and upon the buyer. Among the 18 types of marketing channels, 'Farmer-Retailer of husked rice-Consumer' (channel 18) was found to be the best, followed by the 'Farmer-Wholesaler of husked rice-Retailer of husked rice-Consumer' (channel 17), but only 3 and 5% of unhusked rice were converted to husked rice and sold through these channels, respectively. So, the study indicates that the marketing of rice was not efficient on the basis of earnings. Obviously, income influences the standard of living conditions. The study found that most of the farmers living standard was listed as bad conditions. As the standard of living was bad, the efficient rice marketing was very important because it was the main source of income of the farmers in the surveyed area.

Most of the farmers know the benefit of husked rice selling instead of unhusked rice, but they must sell the raw product (paddy) after harvesting, due to five main problems: (1) resource constraints to maintain their livelihood during a delay; (2) the need to pay back the money that is borrowed for production; (3) Oral agreements with the money lenders to sell the raw product to them after harvesting (4) absence of an organized farmers market and (5) the lack of storage facilities. To reduce the tendency of selling the raw product (paddy), the government of Bangladesh should take more initiatives to protect rural farmers by giving them loans on the basis of production, to establish organized farmers' markets and to create storage facilities. The availability of husking and transportation facilities at the rural level and the opportunity to sell husked rice to retailers of husked rice in the local market, surely help some farmers to earn more money (by selling husked rice) than is possible in current common marketing practices. In conclusion, the study emphasizes the benefits of husked rice (*chal*) marketing to retailers of husked rice instead of unhusked rice (*dhan*), which indicates the most efficient marketing channel in the area. It will uplift farmers' income and ultimately will be helpful to improve the standard of living for them.

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