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Rice Farmers' Returns in Selected Area in Jessore District of Bangladesh

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Abstract: Small parcel of land not only act as constraints to investment, but also deprive farmers of access to formal credit, inputs and other institutional services required for improving agricultural practices, in terms of production and marketing. The study was based on an interview conducted during February to March 2005 for the year 2004, in Jhikargacha Upazila in the district of Jessore, in Bangladesh. In the study, 64 *boro* rice farmers (small: 30, medium: 23 and large: 11) were randomly selected as respondents, from two villages, namely Barbakpur and Bodhkhana. The objectives of this study are to investigate the returns of *boro* rice farmers, considering their selling period, on the basis of farmers' category. The net returns of the farmers for a given period were not widely varied, irrespective of the categories of farmers and irrespective of middlemen as well. The net returns for the farmer varied according to the selling period, whether it was sold immediately after harvesting or during the lean period. The study found that although farmers in the area know that the selling of rice immediately after harvesting reduces their returns, but they, especially small and medium farmers, cannot hold back from this type of practice. The reason for selling the rice immediately after harvesting was not only a marketing problem but also the economic problems of the farmers.

Key words: Rice, farmer, land ownership, selling period, returns

INTRODUCTION

Small parcel of land not only act as constraints to investment, but also deprive farmers of access to formal credit, inputs and other institutional services required for improved agricultural practices, in terms of production and marketing. As a result, farmers are often forced to continue traditional agricultural practices (Rasul and Gopal, 2004; Devendra and Thomas, 2002). In Bangladesh, land ownership serves as a surrogate for a large number of factors, as it is a major source of wealth and influences crop production and marketing (Rahman, 2000). The ownership of agricultural land remains one of the most difficult problems in the countryside in Bangladesh (Rahman and Takeda, 2004). Large farmers have comparatively more production and marketing facilities than small and medium farmers. Mainly, large farmers deploy their own money for cultivation and due to having comparatively less resources constraint, they can keep the product for future markets to gain a better price. On the other hand, most of the small and medium farmers either used borrowed money from informal sources for cultivation, or used credit purchasing inputs, which lead to selling the product immediately after harvesting to mitigate their debts, selling at a lesser price compared to the higher prices that can be obtained during the lean period. Also, the unavailability of alternative resources for their livelihood and marketing complexity influence not keeping the product for future marketing. A study conducted by Rahman *et al.* (2005) found that Bangladesh has a comparative advantage in the production of high yielding rice, but the marketing system is not conducive to getting a fair price for the farmers.

During and after the green revolution, the yield rate surprisingly increased, irrespective of the land ownership. But net returns from rice selling was still lower for small and medium farmers than for large farmers, due to the increase of the some elements of the inputs that affect the cost of production and reduce the price of the product. Many factors contribute to reducing the prices including

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the bargaining power of the seller, the demand-supply situation, the selling nature of the product, the period of selling, the nature of the product, the presence of middlemen, etc. As rice is the main source of income, returns from it are directly related to rural subsistence. However, the objectives of this study are to investigate the returns of *boro* rice farmers considering the selling period for them, on the basis of land ownership (small, medium and large in the surveyed areas) to determine the further steps needed for their well-being.

MATERIALS AND METHODS

This study was based on an interview during February to March 2005 for the year 2004, in Jhikargacha Upazila, in the district of Jessore in Bangladesh. The Study site was 276 kilometers south west of Dhaka and 15 kilometers west of Jessore district headquarters. In the study, as mentioned in the Table 1, 64 *boro* rice farmers (Small: 30, medium: 23 and large: 11) were randomly selected as respondents, from two villages, namely Barbakpur and Bodhkhana. This area was selected for study for two major reasons. First, the area bears the common characteristics of Jessore district, comprising different types of farmers and producing rice as a main crop. And second, so far no attempt had been made to evaluate the differences in the returns of the farmers on the basis of land size. According to the definition of the Bangladesh Bureau of Statistics (BBS, 2002), the study area include landless, small (a farm holding having an operational area of 0.05 to 2.49 acres of land with a minimum of 0.05 acres as cultivated area), medium (a farm holding having an operational area of 2.50 to 7.49 acres of land) and large (a farm holding having an operational area of 7.50 acres and above) land holdings.

Boro rice cultivation starts in December 2003/January 2004 and ends in April/May 2004. In the *boro* season, the length of the selling period is almost six months. It starts from mid-April and continues up to mid-October. In the study, descriptive statistics have been used for calculating the land ownership and production, the quantity of rice sold, rice sold to middlemen, the selling period and quantity, the price of rice, the marketing cost and net returns. The respondents reply as to the reasons for selling the rice immediately after harvesting is shown as a percentage value.

Table 1: Sample collection

Sample	Farmers (own land and tenant cultivation)
Scope	Regional, Jhikargacha Upazila under Jessore district
Data collection method	Face to face interview with individual farmer
Sample unit	*Boro* rice farmer
Sample size	64 farmers
Classification of the sample	Small farmers (30), medium (23) and large (11)
Sample procedure	Random sampling
Rice cultivation period	Started December 2003/January 2004 and ended in April/May, 2004
Rice selling period	Mid April-Mid October
Data used for the period	Year, 2004
Data collection period	February-March 2005

RESULTS AND DISCUSSION

Socio economic conditions: Agriculture constitutes a large share of national output and employment, accounting for 20.5% of GDP (WB, 2005), 63% of employment, with about 57% being employed in the crop sector. At present, among all crops, rice covers 75% of the cultivated land and produces 74% of produce. The output of food grains increased by 2.3% compared to the fiscal year 2002-03, reaching 27.3 million ton in fiscal year 2003-04. The output of *boro* rice, the single largest crop, increased by 5.03% (BB, 2004). Bangladesh has reached self-sufficiency in rice production. Nevertheless, the country's rice production, in terms of the cost involved and returns, poses a great challenge for the survival of small and medium level farmers. After the green revolution, HYV *boro* rice has gained importance, because yields of *boro* rice are higher than yields of other types of rice.

Access to adequate and high quality production inputs like credit, seeds, fertilizer and irrigation facilities are inadequate in Bangladesh agriculture (Husain, 1999). In most villages, few families control enough land to live comfortably and a large percentage of families have either no land or not enough to support them. 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. It is well recognized that fragmented holdings have been a major constraint in the implementation of good farming practices by small–scale farmers (Srinath *et al*., 2000). In Bangladesh, the foremost among the constraints are the fragmented holdings and poor socioeconomic conditions of small farmers for whom agriculture is a livelihood activity (Rahman and Takeda, 2004). Due to the lack of money for cultivation, small farmers not only have to borrow money but also cultivate only small parcels of land, although these types of farmers have available agricultural labor. At least one third of the households in most villages are farming rented land. A production system dominated by a single crop (i.e., rice) is neither scientific nor acceptable, from an economic

point of view. To obtain money to meet their immediate debts and livelihood, many farmers are obliged to sell their produce as soon as it is harvested.

Credit market: At present, rural financial markets in Bangladesh are fragmented and inadequate. There are very limited savings services available in rural areas and the wealthy have relatively better access to cheap credit. The importance of the banking sector in the decline of rural financing may be exemplified by the fall in their rural advances from 24% of all advances, in 1990 to 18% in 1997 (Husain, 1999). It is estimated that in the 2001- 2002 fiscal year, the total amount of loans disbursed by the four NGOs (Grameen Bank, BRAC, PROSHIKA and ASHA) stood 1.7 times higher than the total agricultural/rural credit disbursed by all the nationalized commercial banks, the specialized agricultural bank and other government development organizations (BB, 2004). NGOs are mainly concerned with the poor who are either landless, or have marginal land ownership, but are unable to fulfill their basic needs of life. The credit programs of these NGOs are conducted mainly for nor farm activities and only to some extent for agriculture, with the objective of crop diversification, especially vegetables and cash crops, but not for rice cultivation. Both the banking institutions and the NGOs overlook the small and medium farmers who contribute significantly to rice production.

Land ownership, cultivation and production: In terms of the tenureship of land, three types of farmers, own land cultivator, owner-cum-tenant cultivator and tenant cultivator, were found in the surveyed area. In Jhikargacha Upazila, the percentage of small, medium and large households was 78, 19 and 3, respectively. 61, 72 and 82% of small, medium and large farmers respectively, were using their own land. 36, 27 and 18% of small, medium and large households used both their own and tenant land. On the other hand, 2.24 and 0.22 and 0.12% of small, medium and large households respectively, used only tenant land. The cultivated area of small, medium and large households was 1, 4 and 11 acres, respectively. The area of net cultivation for small, medium and large households were 1, 3 and 9 acres, respectively. The percentage of the gross cropped area of the entire district was 12, 13 and 15 for small, medium and large farmers, respectively. Individual farming activities among all categories of farmers, rather than any group activities for purchasing inputs, accumulation of production elements and cultivation practice, were the principal characteristic in the area. Among the 30 small farmers, 6 (20%) farmers used exclusively tenant land, in terms of sharecropping, where no medium farmer used exclusively tenant land. The mean value of land size for rice cultivation and production were the highest, measured at 3.26 acres and 7317 kg, respectively for the large farmer, as shown in Table 2.

Table 2: Land ownership and production

Category of farmer	Land (acre)				Production (kg)	
Small farmer, total: 30	N	No. (%)	Mean	Std. Dev.	Mean	Std Dev.
Own land	16	53	1.44	0.59	3318	1362
Tenant land	6	20	0.98	0.40	2227	845
Own + tenant	8	27	1.81	0.42	4278	1082
Medium farmer, total: 23						
Own land	17	74	1.86	0.55	4291	1228
Own + tenant	6	26	250	0.40	5187	748
Large farmer, total: 11						
Own land	11	100	3.26	0.90	7317	1853

Source: Field survey, 2005. N = Number of farmer

Marketing of the area: The selected villages are close to Jhikargacha Upazila headquarters and connected by a paved road. The farmers carried their products either to Jhikargacha bazaar or to village market by head load, cycle, van and cart. Before selling, the farmers kept their products at their house or at the store of local businessman. To keep the products at their house, the methods used by most farmers were of an indigenous type (such as storage in woven-split bamboo, bamboo baskets, jars and pitchers, mud-walled "golas" and golas made of bamboo and wood, jute bags, plastic can, etc.). In the entire Upazila, 32729 farm households were cultivating different types of crops on 57729 acres of land. There was only one cold storage named 'Razanigonda Cold Storage Ltd.' at Gadkhali bazaar, which was mainly used for potato, wheat and pulse storage. Although the agricultural products price, including rice, was broadcast by Radio Bangladesh Khulna every evening, as well as weekly and monthly bulletins were being published by the Directorate of Agricultural Marketing (DAM), the farmers were not familiar with that information. When many farmers came at the same time to the middlemen to sell their products, the shortage of transaction money of the middlemen meant that farmers received only the partial price of the products from them, i.e., credit selling was found in the area. Due to lack of fixed price, the price of rice is fixed by mutual bargaining between the farmers and the middlemen. Farmers in the areas sold their rice to four types of middlemen, i.e., to village merchants, stockists, huskers and wholesalers/*arathdars*. The principal characteristics of the area meant that farmers conducted all kinds of marketing activities individually. In the area, a multiplicity of middlemen was found. Actually, the rice business is open to virtually any type of person.

Rice selling: Table 3 shows the landowner's share, consumption, seeds and other and the sale of rice in 2004

Table 3: Rice selling

Category of farmer	Qty (kg)			
Small farmer:	N	No. (%)	Mean	Std. Dev.
Land owner' share	14	47	722	313
Consume	30	100	455	151
Seeds and other	24	80	148	93
Sale	30	100	2445	1271
Medium farmer:				
Land owner' share	6	26	659	176
Consume	23	100	485	151
Seeds and other	19	83	381	305
Sale	23	100	3554	997
Large farmer:				
Consume	11	100	762	205
Seeds and other	11	100	464	260
Sale	11	100	6091	1882

Source: Field survey, 2005

Table 4: Rice sold to middlemen

Category of farmer	Qty (kg)			
Small farmer:	N	No. (%)	Mean	Std.Dev.
Village merchant	2	7	643	207
Stockist	4	13	2403	1659
Husker	2	7	1402	525
Arathdar	10	33	2307	1077
Two types of middlemen	7	23	2642	730
Three types of middlemen	4	13	3649	1699
All types of middlemen	1	3	3482	-
Medium farmer:				
Stockist	1	4	2773	-
Husker	3	13	2653	917
Arathdar	11	48	3321	937
Two types of middlemen	6	26	4542	547
Three types of middlemen	1	4	3175	-
All types of middlemen	1	4	4053	-
Large farmer:				
Arathdar	6	55	6333	2270
Two types of middlemen	4	36	5719	1710
All types of middlemen	1	9	6124	-

Source: Field survey, 2005

in the surveyed area. Fourteen (47%) of the small farmers and 6 (26%) of the medium farmers used tenant land and for that they paid 722 and 659 kg of rice respectively, to the landowners. Rice is the staple food, followed the wheat. All small, medium and large households consumed 455, 485 and 762 kg of rice, respectively. For further cultivation and other purposes, 24, 19 and 11 small, medium and large farmers respectively, kept or disposed of 148, 381 and 464 kg. Here, the other purposes that were included with seeds could be described as a contribution by the farmer to social welfare, a free donation to poor relatives and wastage. The mean amounts of rice sold by the small, medium and large farmers were 2445 (73%), 3554 (79%) and 6091 (83%) kg, respectively. Table 4 shows how many farmers and how much rice was sold to the middlemen. Most of the farmers in the area sold their rice to wholesaler/*arathdar* exclusively.

Selling period and price received: Table 5 shows the selling period and the quantity of rice sold. Among the small and medium farmers, 11(37%) and 7(30%) farmers respectively sold all of their rice within one month after harvesting. Only one small farmer sold his entire product between the 2nd and 3rd month after harvesting, while no medium farmers sold their product during that period. Two large farmers sold their entire rice between the 4th and 5th month. Most of the large farmers sold their rice after the second month and onward after harvesting. Table 6

Table 5: Selling period and quantity

Selling period	Qty (kg)			
Small farmer:	N	No. (%)	Mean	Std.Dev.
Month: ≤ 1	11	37	1544	794
Month: 2-3	1	3	4260	-
Month: ≤ 1 and Month: 2-3	18	60	2894	1205
Medium farmer:				
Month: ≤ 1	7	30	2916	1007
Month: ≤ 1, Month: 2-3 and Month: 4-5	16	70	3833	882
Large farmer:				
Month: 4-5	2	18	8067	1023
Month: ≤ 1, Month: 2-3 and Month: 4-5	1	9	3738	-
Month: 2 -3 and Month: 4-5	4	36	5390	1174
Month: 2-3, Month: 4-5 and Month: ≥ 6	4	36	6392	2205

Source: Field survey, 2005

Table 6: Price of rice (Gross returns), Tk/100 kg

Category of farmer	Tk			
Small farmer:	N	No. (%)	Mean	Std.Dev.
Selling to village merchant				
Month: ≤ 1	5	17	682	17
Selling to stockist				
Month: ≤ 1	9	30	683	18
Month: 2-3	4	13	773	16
Selling to husker				
Month: ≤ 1	10	33	672	10
Month: 2-3	6	20	772	12
Selling to *arathdar*				
Month: ≤ 1	22	73	674	16
Month: 2-3	10	33	775	21
Medium farmer:				
Selling to village merchant				
Month: ≤ 1	2	9	670	14
Selling to stockist				
Month: ≤ 1	5	22	675	11
Month: 2-3	5	22	784	13
Selling to husker				
Month: ≤ 1	8	35	680	14
Month: 2-3	3	13	770	5
Month: 4-5	1	4	870	-
Selling to *arathdar*				
Month: ≤ 1	16	70	675	15
Month: 2-3	8	35	782	13
Month: 4-5	1	4	900	-
Large farmer:				
Selling to village merchant				
Month: 2-3	1	9	790	-
Selling to stockist				
Month: 2-3	3	27	792	8
Month: 4-5	2	9	890	-
Selling to husker				
Month: 2-3	1	9	785	-
Month: 4-5	3	27	887	15
Month: ≥ 6	1	9	905	-
Selling to *arathdar*				
Month: ≤ 1	1	9	675	-
Month: 2-3	9	82	786	14
Month: 4-5	8	73	876	14
Month: ≥ 6	3	27	895	9

Source: Field survey, 2005; US $1 = Tk 62.25

shows that at any given time, the price of rice received by any category of farmers from any type of middleman did not widely vary. For example, when they sold their product within one month after harvesting, small farmers' gross returns were Tk. 682, 683, 672 and 674 for 100 kg of rice from a village merchant, stockist, husker and *arathdar*, respectively. The gross returns of medium farmers at this period were Tk. 670, 675, 680 and 675 from a village merchant, stockist, husker and *arathdar* respectively, while the large farmers return was Tk 675 from an *arathdar*.

Marketing cost and net returns: Table 7 shows the marketing costs of the three categories of farmers in the surveyed areas. Wages, drying, packaging, transportation, weighting, storage, loading and unloading costs in respective cases have been considered as marketing costs. In the surveyed areas, different types of marketing costs were found in selling the product. It depended upon the selling period and to whom and where the product was sold. As shown in the table, at any given time, the marketing costs of any category of farmers for selling their product to any type of middleman did not widely vary. For example, when they sold the product within one month after harvesting, small farmers' marketing costs were Tk 12, 14, 13 and 14 for selling 100 kg of rice to a village merchant, stockist, husker and *arathdar*, respectively. The marketing costs of medium farmers at this period were Tk 11, 15, 17 and 16 for selling to a village merchant, stockist, husker and *arathdar*, respectively while the large farmers' marketing cost was Tk 19 for selling to an *arathdar*. Regarding the cost of marketing, large households were found to have spent the highest amount of money. Due to comparative economic stability, large farmers kept their produce for future markets to get a better price, so their marketing costs are comparatively higher than those of small and medium farmers.

The net returns to the farmer in the study were calculated after deducing the marketing cost from gross returns. The net returns to the farmers at any given period did not widely vary irrespective of the categories of farmers and irrespective of the middlemen as well. The net returns to the farmer varied according to the selling period, whether it was sold immediately after harvesting or during the lean period. Generally, the rice price becomes lowest during the harvest period and reaches the highest during the off-season period. So, price variation must exists due to the selling period, based on whether the rice sold in the harvesting period or the lean period. When farmers sold their produce within one month after harvesting, they received a net return minimum Tk 656 and maximum Tk 670 for 100 kg of rice. The net return would be minimum Tk 730 and maximum Tk 751 when sold them between the 2nd and 3rd month after harvesting. When the farmers sold their rice between the 4th and 5th month, the net returns would be minimum Tk 822 and maximum Tk 855, while selling the rice during 6th months and onward, the minimum and maximum net returns would be Tk 837 and 845 respectively.

Table 7: Marketing cost and net returns, Tk./100 kg

Category of farmer	Marketing cost		Net returns	
Small farmer:	Mean	Std. Dev.	Mean	Std. Dev.
Selling to village merchant				
Month: ≤ 1	12	3	670	17
Selling to stockist				
Month: ≤ 1	14	3	668	18
Month: 2-3	37	7	735	19
Selling to husker				
Month: ≤ 1	13	4	659	11
Month: 2-3	30	7	742	14
Selling to *arathdar*				
Month: ≤ 1	14	5	660	18
Month: 2-3	33	7	742	22
Medium farmer:				
Selling to village merchant				
Month: ≤ 1	11	4	659	10
Selling to stockist				
Month: ≤ 1	15	4	660	10
Month: 2-3	39	7	745	15
Selling to husker				
Month: ≤ 1	17	3	663	13
Month: 2-3	40	6	730	10
Month: 4-5	55	-	855	-
Selling to *arathdar*				
Month: ≤ 1	16	5	659	15
Month: 2-3	37	6	745	14
Month: 4-5	65	-	835	--
Large farmer:				
Selling to village merchant				
Month: 2-3	39	-	751	-
Selling to stockist				
Month: 2-3	42	6	750	13
Month: 4-5	63	7	827	7
Selling to husker				
Month: 2-3	40	-	745	-
Month: 4-5	56	4	831	19
Month: ≥ 6	60	-	845	-
Selling to *arathdar*				
Month: ≤ 1	19	-	656	-
Month: 2-3	36	8	750	17
Month: 4-5	54	7	822	15
Month: ≥ 6	58	8	837	3

Source: Field survey, 2005. The number of farmer is as same as Table 6 in each respective case

Reason for selling immediately after harvesting: The farmers of all categories (small: 30, medium: 23 and large: 1) who sold their products immediately after harvesting (Month: ≤ 1) were asked the reason for selling. The socio economic conditions, limitations of resources and unavailability of marketing facilities affect the selling period of the rice. It was observed that the reasons described in the Table 8 are those mainly responsible for the farmers selling the rice immediately after harvesting. All respondents among the small farmers replied that

Table 8: Reason for selling

Category of farmer	N	No. (%)
Small farmer:		
Resource constraints to maintain the livelihood during a delay	30	100
The need to pay back the money that is borrowed for production	27	90
Oral agreements with the moneylenders to sell the raw product to them after	19	63
The need to pay the money from where the inputs purchased on credit	16	53
Lack of storage facilities	29	97
Price fluctuation	5	17
Lack of organized farmers' market	30	100
Medium farmer:		
Resource constraints to maintain the livelihood during a delay	18	78
The need to pay back the money that is borrowed for production	15	65
Oral agreements with the moneylenders to sell the raw product to them after	12	52
The need to pay the money from where the inputs purchased on credit	11	48
Lack of storage facilities	21	91
Price fluctuation	5	21
Lack of organized farmers' market	23	100
Large farmer:		
Lack of storage facilities	1	9
Price fluctuation	1	9
Lack of organized farmers' market	1	9

Source: Field survey, 2005

they sold their product due to 'resource constraints to maintain their livelihood during a delay' and 'lack of organized farmers' market'. Ninety seven percent of small farmers replied that they had no adequate storage facilities where the farmers who responded that there was 'the need to pay back the money that is borrowed for production was 90%. In this regard, the selling period of rice is directly related to production phenomena, especially the costs involved. For example, when farmers use their own money for production, they can keep the product for a future market to gain a better price. But when money for production is borrowed from informal sources, farmers must return that money, with a certain amount of interest or by mutual agreement within the predetermined time. A large number of small and medium farmers borrowed money for production from the different types of intermediaries in the areas, with whom they had an oral agreement to sell the product immediately after harvesting. Besides, credit purchasing of the inputs also influences the selling of the product immediately after harvesting to mitigate the debts with local input traders. In the case of medium farmer, all respondents replied that there was a lack of organized farmers' market in the area and those that stated there was a lack of storage facilities was 91%. Among the eleven large farmers, only one farmer partially sold the product immediately after harvesting. That farmer replied that the three reasons for selling were the; lack of storage facilities, price fluctuation and the lack of organized farmers' market.

The product characteristics, plus the high degree of competition among middlemen in the areas, limits the scope of them exercising opportunism. They are bound to compete with each other strongly, leaving little room for any middleman to impose on farmers lower prices than the prevailing market prices. In the area where so many middlemen are operating, it would not be difficult for a farmer to find out if a price offered by a middleman for his product is appropriate, by checking with his neighbors dealing with other middlemen. The study found that selling price of rice was almost the same to any type of middleman in a given period. The price of rice generally becomes lowest in the harvest period and reaches the highest in the off-season period. The price variations explained in the study consider only the selling period of the rice and whether it was sold immediately after harvesting. The study found that most of the small and medium farmers sold their rice immediately after harvesting compared to the large farmers, so the returns of small and medium farmers were lower than the large farmers. If rice is stored/kept by the farmers for about 4 to 5 months after harvesting to sell in lean months, the net return typically increases.

Every farmer in the area knows that the selling of rice immediately after harvesting reduces their returns; small and medium farmers especially cannot escape from this type of practice. The cause of selling the rice immediately after harvesting was not only a marketing problem but also an economic problem for the farmers. For example, when farmers cultivated rice by borrowing money from informal sources, or used credit purchased inputs, they are bound to sell the product immediately after harvesting to mitigate the debts. If farmers had available money for production, they would not have to worry about the early pay back of money, then they could keep the product for a future market to gain a better price. In other words, it can be said that when farmers had available alternative resources for maintaining their livelihood, they would not sell the product immediately after harvesting.

CONCLUSION

Small and medium farmers have inadequate production and marketing facilities. These types of farmers have the highest cost of production compared to large-scale farmers. On the other hand, the market value of their produce is the lowest (Sandra and George, 2005; Rahman *et al*., 2005; Hayami *et al*., 1999). Small and medium farmers cultivate small areas not only due to small parcel of land but also inadequate capital for buying inputs. They either have no assets to mortgage or have very little and therefore banks are generally unwilling to give them credit (Edison, 1997). Small farm households

may face higher interest on their working capital due to capital market imperfections (Chavas, 2001). When in need, large farmers have easy access to the credit market for agricultural production. Moreover, they can borrow money without any interest from their relatives and friends, which not only lowers their production costs but they also gain higher prices for the produce by selling it in a future market. Poor socio economic conditions, a fragmented land structure, an individual farming tradition, the variety of cultivation of produce etc. are keeping the small and medium farmers away from making united efforts towards building an association through which they can raise funds by themselves and one they can eventually use to mitigate their financial obstacles to cultivation and marketing. As rice is the main source of income and small and medium farmers are the greater portion of the farming community, their existence is closely related to the total agricultural output of Bangladesh. So, for their betterment, the following policy recommendations are made:

- To prevent credit purchasing of inputs, borrowing money from informal sources and to avoid selling the raw product immediately after harvesting for their livelihood, government institutional loans should be made available on easy terms and conditions, on the basis of production.
- The credit programs of NGOs (Grameen Bank, BRAC, PROSHIKA and ASHA) should be extended not only in the non-farm, vegetables and cash crop sector but also major emphasis might be given to the rice production sector as well.
- Community storage and organized farmers' markets should be established where every farmer can access easily.

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