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Impact of New Technology on Sharecropping in Bangladesh

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The economy of Bangladesh is mainly agrarian. The sector is likely to play a vital role in achieving self-sufficiency in food-grain production. Agricultural development is essential for our survival. Agricultural development could be achieved with the proper adoption of modern inputs like irrigation technology, chemical fertilizer, HYV of seeds and pesticides either individually or in their suitable combination. The seed-fertilizer-irrigation technology, which is also known as the new technology has created great opportunities of expanding food production in Bangladesh. The diffusion of the new technology has helped in changing the nature and terms of tenancy market, impacting on the distribution of income, poverty and employment. Normally tenant farms had adopted new technology. But findings obtained by a farm the different village studies (Islam and Halim 1976, Hossian 1977, Ahmed 1981) it was not possible to reach at a clear decision regarding the relationship between the adoption of modern technology by a firm and its tenurial arrangement. The relation between the adoption of new technology by a farm and its tenurial arrangement is a controversial issue. A. Dusgupta (1998, P. 144) observed that sharecroppers have little to achieved from the spread of modern technology. He also observed that the advent of modern technology has made the position of the tenants extremely vulnerable. Smith (1776) considered that the sharecropping system would ultimately disappear. Georgescu-Roegen (1969) and Bhaduri (1973) pointed out that the institution of share tenancy as a feature of precapitalist modes of production and the system of sharecropping were considered to be a barrier of new technology. While, Bardhan and Srinivasan (1971), Bardhan (1976) and

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Pearse (1980) did not think tenancy as an impediment to new techonology. Without going to theoretical questions and debates here attempt has been made to explain the impact of new technology on share cropping in Bangladesh.

Methodology

The study is based on secondary data. Secondary data were collected from diffeent publisedh and unpublised documents.

Importance of the Study

The results of the study may be of great use to policty markers . Extension workers may tulize the results of the study in making decisions regarding irrigation technology, share tenancy and farm employment. The results of the study have also academic importance to the teachers and the students of economics.

Results and Discussion

In this section we shall discuss the impact of irrigation technology on share tenancy.

Impact of New Technology on Sharecropping.

Tenureship of Agricultural land

In Bangladesh land tenure situation has undergone changes. Pure tenant farms in rural Bangladesh had been declining between 1960 and 1983-84 but it increased between 1983-84 and 1996 (M. Hossain 1999, p-36) Censes of Agriculture and live stock (1983-84) reported that sharecropped-in land was only 16.81 percent, it increased to 21.6 percent in 1996 (censeus in Agriculture 1996).

The most common form of tenancy relation in rural Bangladesh is sharecropping. Under share cropping system the tenants and the landlords share the output and risk and some cases the costs too. But output and costs are not always shared equally between the parties. One important factor which had been linked with sharecropping was cultivation risk. In this context M. Glaser (1989) stated “different access conditions to irrigation water and HYV inputs leads to different levels of cultivation risk. This will affect the agricultural production structures, patterns of accumulation at household level and the rules and meaning of land tenancy”.

Ali (1989) observed that the following the introduction of modern technology in agriculture the rich farmers had distorted the rural institutions to there own interest. Ali further stated that " "landless and small owner tenants have been forced out of the land lease market. The landlords might have thought that such tenants would not be able to use purchased inputs associated with the new technology in the rented land. On the other hand, input cost sharing has been introduced in may areas to reap the benefit of the new technology" (Ali, A.M. 1987).

Land Leasing and Operational Arrangement of cropped land by farm size groups in Bangladesh

Available data indicated that irrigators leased in more land and leased out less land than the non irrigators. M.K. Hussain (1986, P.34-35) observed that under land leasing arrangement farms when irrigated leased in 3.74 percent of their operated or cropped land and leased out 17.35 percent of their owned land and leased in 4.46% of their operated or cropped land . He also found that small farmer being more irrigation conscious have the tendency to leased in more land (on an average 0.35 areas) while they irrigated and leased out an average 0.31 areas of non irrigated land. He further said that large farms have the tendency to rent out higher proportion of their owned land because they can not manage it.

Available data indicated that large farmers in non irrigated village sharecropped in no land. But in irrigated village the large farmers sharecropped in 1.1 percent of other's land. Medium farmers sharecropped in more land (47.70%) in irrigated village, while, small farmers sharecropped in more land (64.71 percent) in non irrigated village (M.N. Islam 2002). On the other hand, small farmers sharecropped out no land in irrigated village, medium farmers in non irrigated village sharecropped out no land (M.N. Islam -2002). Hamid et. al (1982) pointed out that there had been no qualitative change in tenurial arrangements as a result of the adoption of technology. M. Hossain (1986) stated that share tenancy in Bangladesh is exploitative in nature. White (1986) stated "due to the increased cost of cultivation, owners farmers are renting out their farm land to sharecroppers.

Security of Tenure

There are no written lease contract between the tenants and the landlords. In the absence of written contracts tenants of rural areas have no security. As a result, landlords can easily evict any tenant when they so desire. When tenants fail to

satisfy the landlords can easily evict any tenant when they so desire. When tenants fail to satisfy the landlords in expanding yield rate or in using adequate modern inputs they face the consequences of eviction. M.N. Islam (2002) stated that eviction of sharecroppers for the purpose of resumption of land for self cultivation is common in irrigated village. While, it is rare in non- irrigated village. A Dusgupta (1998 P. 145) pointed out that evication of tenants have become a common matter especially after the introduction of canal water irrigation. He also stated that a sharecropper who invest more on modern agricultural inputs gets a chance of securing a lease for the second time. Jansen (1979) found that land owners evicted the tenants and employed wage labourers to cultivate the land. He also stated " it is regarded as more beneficial to organize production on irrigated land with wage labourers."

Available data indicated that the short duration of sharcropping relationship M. Hossain (1986) found that about 52 percent of the sharecropping relationship had been lasting less than three years. M.N. Islam (2002) found that about 70.58 percent of the lease units have been lease for one to three years (short terms lease) in irrigated village. While 25 percent of the lease units have been lease for one to three years in non irrigated village. About 11.76 percent of the lease units have been lease for five years or more (long term lease) in irrigated village. But it is only 33 percent in non irrigated village. He further stated that sharecroppers in non-irrigated village were found to have beter security than those of irrigated village, The Land Occupancy Survey of 1978 observed that duration of sharecropping relationship as reported by the sharecroppers was presented below: 26 percent of the sharecroppers had a lease contract that had lasted for less than one year, while 20 percent lease contract lasting between one to two years, 8 percent lease contract lasting between three to four years. Jansen (1987) found that 59 percent of the sharecropping relationship had lasted less than three years.

Input and Output Sharing

In sharecropping arrangement, labour was provided in-full by the sharecroppers. But the costs of irrigation, seeds, chemical fertilizers, power tiller etc were shared by the landlords. Bayes and Sayeeduzzaman (1991, P.68) found that sharecroppers bear all the input costs and surrender half of the output to the landlords. M.N Islam (2002) observed that output shared betwen the sharecroppers and the landlords is a standard 50 : 50 basis. he also found that in irrigated village normal practice is to share the costs of irrigation, seeds, chemical fertilizer equally between the sharecroppers and the landlords. While in non irrigated village the practice is to share the costs of seeds, fertilizer are equally

shared between the parties. Although in both the villages human labour, animal labour and manures are supplied entirely by the sharecroppers. A good number of village studies found that the landowners were sharing of costs of non labour inputs in the sharecropped land where modern varieties of rice and wheat are producted (Zaman 1973; M. Hossain 1979; BUP 1982). A Dasguspta (1998 P1 44) found that tenants surrender 50 percent output and bear all costs of production except land revenue and irrigation costs. Costs of modern inputs, human labour, animal labour etc are brone entirely by the sharecroppers.

Suggestions of Policy Implications

The need for tenancy refoms is essential in Bangladesh Special attension should be given to protect the rights of sharecroppers Administrative and legal measures should be taken to protect the sharecroppers Absentee landlordism should be abolished.

Conclusion

Modern technology is essential for agricultural development of Bangladesh. Introduction of irrigation technology have brought about significant change on share tenancy. Sharecroppers in rural Bangladesh have little to achieve from the spread of irrigation technology. When tenants fail to satisfy the landlords in expanding yield rate or in using adequate modern inputs they face the consequences of eviction. Eviction of tenants for the purpose of resumption of land for self cultivation is common in irrigated land. In may cases, sharecroppers bear all the non labour input costs and surender 50 percent of the output to the landlords.

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