

VEGETABLE GROWERS OF BRAC AND FLOOD 1998
A case study of Sonaidanga Baikunthapur VO

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Abstract

This study was conducted to know how the flood of 1998 affected the vegetable production of BRAC members and how they copped with the situation. The observation was conducted on 6 members of Sonaidanga Baikuntthapur VO in Gaibandha. On average they used 30.2 decimals of land for vegetable cultivation. Vegetable cultivation was an important source of income for the households. Due to flood the vegetable plots went under about 137 centimetre deep water. On average they lost Tk.3,188 due to the damage of their vegetable crops caused by flood. It seriously affected their regular income flow, thus their normal life. To cope with the situation they took some measures such as disposing of savings, starting of new business, taking of loan, reducing household consumption and expenditure, and selling of stored paddy. In order to make up the losses members needed new loans from BRAC for vegetable cultivation after flood.

Introduction

Vegetable production in Bangladesh falls far short of its requirement. Per capita per day production of vegetable in Bangladesh is only 31grams, less than one sixth of requirement. Around 80 percent of Bangladesh population suffers from severe to moderate malnutrition. The overall malnutrition can partly be attributed to inadequate supply of vegetables. Thus to increase vegetable supply BRAC initiated vegetable cultivation programme under the aegis of its Rural Development Programme. The objective of vegetable cultivation promoting is to improve the nutritional status of its members and also to provide them an additional source of income (Khan n.d.). It promotes vegetable cultivation among its members by providing them training, technical services, inputs and credit. There are 58,723 vegetable growers with a total 20,623 acres of land under vegetable cultivation. Most of the participants are women (BRAC 1997).

Flood in Bangladesh

Bangladesh, the low lying delta situated in the confluence of three great rivers of Asia -- the Ganges, Brahmaputra and Meghna constitutes one of the largest active flood plains of the world (Sadeque1991). The flat deltaic topography of Bangladesh makes it prone to natural disaster, especially floods, droughts and cyclones (Rahman1992). Floods are the most recurrent and devastating phenomena, occurring in the monsoon and sometimes around every year in Bangladesh (Haque1991). The vegetable cultivation activities of BRAC in many cases are not spared from this flood.

The severe most flood of this century taking place in this year has caused widespread damage to the agricultural production in large scale in Bangladesh. According to an estimate, 760,000 hectares of farmland have been affected in varying degrees; and 425,000 hectares of this land under rice and other crops cultivation have been totally damaged (The Bangladesh Observer 1998). The economic activities of BRAC members were not spared by the flood as it persisted for more than two months wreaks havoc to all kinds of crops, but particularly to various kinds of vegetable cultivation.

Objective of the Study

Vegetable is an important supply of nutrition for the poor, meaning that if vegetable growing is affected the poor will be the first to suffer. Thus realizing the importance of vegetable growing the study intended to know how severely the flood affected vegetable production of BRAC members and how they cope with the situation.

Methodology

Six vegetable cultivators i.e., VO members associated with *Sonaidanga Baikuntthapur* VO under Mohimaganj RDP Area Office in Gaibandha were intensively observed. The observation was conducted on 22 - 24 August 1998. Data were collected from the VO members and their husbands through structured questionnaire and informal discussion.

Limitation of the Study

The study was conducted at the early part of the flood. It got worse after the observation was made. That aspect has not been covered in this paper.

Basic Information of the Member Households

The average age of the members was 29 and their husbands' was 39. On average there were 4.7 members in their households. Both members and their husbands were working to earn for the households. In the case of a household an adult son was contributing to the household income by working as a wage labourer.

The members' husbands' occupation was crop farming. They were involved with both on-farm and off-farm activities.

The members played a pivotal role for vegetable cultivation which they did along with carrying out of their household chores. They gave loan money and vegetable seeds bought from BRAC to their husbands. The vegetable cultivation was a collective household enterprise. The husbands played a major role in preparing land for cultivation, seed broadcasting and planting, weeding, fertilizer and pesticide application and in hiring labourer. The members looked after vegetable crops from stealing and

from eating by ruminant. All members and their husbands participated in irrigation, harvesting and selling of vegetables. The members participated in selling vegetables, they did it from their homesteads to the retail and wholesale buyers. They did not go to market for selling vegetables like their husbands.

On average the member households owned 10.5 decimals of land for homestead and 26.7 decimals for crop cultivation. Besides, they also rented-in and mortgaged-in 48.2 and 6.3 decimals of land respectively for crop cultivation. The members, on average, employed 30.2 decimals of land under control for summer vegetable cultivation.

Vegetable cultivation

The leafy vegetables such as red amaranth and Indian spinach become ready for harvesting within a short period. So starting from early part of summer respondents could harvest leafy vegetables. After full harvest of red amaranth members broadcast its seeds again. However, the other vegetables cultivated in summer by the members take a longer period for fruiting. Due to cultivating variety of vegetable simultaneously which became ready at different part of the year the respondents could harvest vegetables everyday from field. Consequently they had regular flow of income from selling vegetable.

According to two of the members vegetable production was more profitable than rice production as its production cost was less than that of rice and it was possible for them to repay loan instalment with the return from two weeks' vegetable sale. Therefore they engaged their total land (46 + 53 decimals) for vegetable cultivation.

The members cultivated vegetables both in summer (kharif) and winter (rabi). During summer months (i.e. March - October) they grew okra, Indian spinach, egg plant, red amaranth, bitter gourd, ridge gourd and pointed gourd (Table 1) whereas during winter month (October - March) they would cultivate winter vegetables like cabbage, cauliflower, radish, carrot, gourd, egg plant, red amaranth, spinach, chilli, potato, bitter gourd, pointed gourd, onion, Indian spinach and okra. They produced red amaranth all through the year. These vegetables were commercially grown. But for their own consumption they produced gourd, sweet pumpkin, ridge gourd and vegetable marrow.

These vegetables were grown in their homestead which creeping on the roof of their houses or on 'jangla'.

Table 1. Vegetables grown in summer by the members

Name of vegetables	Number of members (n = 6)
Okra	5
Indian spinach	5
Red amaranth	2
Bitter gourd	2
Pointed gourd	2
Ridge gourd	1
Egg plant	1

Vegetable crops damage by flood

The respondents mentioned that their summer vegetables time to time got inundated and if inundated water logging persisted up to one - two weeks. While this year (year of investigation) flood persisted for more than two months (July - September). According to one of them their lands were inundated almost 22 days earlier compared to the flood in the preceding years. In the case of three members their vegetable plots got inundated gradually whereas in the case of other three members it happened abruptly due to incessant rainfall in their area. The depth of flood water on their vegetable plots was on average 137 centimetre. There was no red amaranth in the field during flood. Except red amaranth all other vegetable crops were standing in the field. The members harvested vegetables partially for inundation, some of which was sold in cheaper price, some others were distributed among the neighbours and were kept for own consumption.

In order to save plots from flood water one of them made relatively higher *bundh* around vegetable plots but she could not save her vegetables from flood. Another respondent transplanted 8 to 10 Indian spinach plants in her homestead from the field as soon as she found her vegetable plot getting inundated. The homesteads were not inundated but flood water was at the edge of homesteads during investigation.

The flood not only damaged their vegetables but also delayed their Aman rice transplantation. Members used a portion of loan for rice cultivation which in fact they received for vegetable cultivation from BRAC. The growers reported that they had prepared seedlings of Aman rice in their seedbed. For the prolonged flood they could not transplant their seedlings.

All members mentioned that they became economically loser due to the inundation of vegetables. According to them the tentative income loss occurred from inundation of vegetables was on average Tk.3,188. It reveals that if there is no flood they would have earned Tk3,188 more from their vegetable sale in the months of July - October. It is, however, evident from Table 2 that before inundation of vegetables the members earned Tk.3,277 from their produced vegetables in the season.

Table 2. Cost and return from vegetable production before flood

Total cost (Taka)	Quantity harvested (Kg)	Gross return (Taka)	Net return (Taka)
1	2	3	3-1
1,749	1,425	5,026	3,277

Coping mechanism

Since the source of income of the member households were farming and a little less than one third of their land (including rented-in and mortgaged-in land) was used for vegetable cultivation and it played an important role in their livelihood. Therefore, the flood tremendously hit their economic condition. It affected on the expenditure, consumption of households as the regular flow of income from the vegetable cultivation was stopped. To cope with this situation they took some measures in making-up their economic loss. The coping mechanisms taken by the members were:

1. **Looking for work and disposing of savings.** Members' husbands and adult sons tried to work as wage labourer but they, except one, could not employ themselves as flood also affected labourers' job market. The exceptional one was the son of a member, he went else where and found

there work as wage labourer. After some days he came back home as work was terminated due to excessive rainfall and flood. Due to lack of work some members disposed their savings for family maintenance.

2. **Starting new business.** Business includes grocery shop keeping, rice selling and cloth selling. One of the members had a small grocery shop. Before flood her son maintained the shop in the *hat* day (marketing day) once in a week. During flood her husband worked in the shop with his son. Others invested their savings for new business i.e., rice and cloth business.
3. **Receiving loan.** The growers mortgaged-out their lands and/or borrowed from non-institutional sources as they needed money for starting small business.
4. **Reducing household consumption and expenditure.** The members reported that they reduced their food consumption to some extent but they tremendously reduced buying non-food item such as soap, hair oil etc.
5. **Selling of stored paddy.** Rice paddy stored for household consumption was also sold to cope with the situation.

Table 3. Members' coping mechanism during flood

Mechanisms	Number of members (n = 6)
Business	4
Disposing of savings	4
Loan receiving	3
Reducing consumption	3
Selling of stored paddy	1

The households adopted these coping strategies in order to : (i) meeting basic needs of their family and (ii) repay loans received from BRAC. It may be mentioned that BRAC staff simultaneously distributed relief materials to the flood affected members and collected loan instalment from them during the period when the study was conducted.

The members desired that the collection of loan instalments may temporarily be

suspended during flood as they had a little or no income. They were facing difficulties in managing money for loan repayment, even though they repaid their loan instalments regularly. The BRAC field staff felt pity for the victims but could do nothing until there was a change in policy by the central authority of BRAC. It is worth mentioning that this study was conducted before the changes have been brought out in the RDP loan policy considering the devastation of flood.

BRAC offers subsequent loan to members with good repayment record. If members fail to refund their weekly instalment they are warned that they will not be extended new loan during next vegetable growing season. Due to this policy the respondents did not want to default in repaying loan instalments. The members were very much concerned about new loan for their forthcoming vegetable cultivation in winter (rabi) since by then they had not yet completed repaying the loans. On the other hand they had no capital of their own as they could not make profit from vegetable cultivation due to flood. In this context, if they are not provided with new loan they would not be able to cultivate winter vegetables. Members felt that in any case they would need fresh loan for the cultivation of winter vegetables. They were passing their life with economic hardship at present.

Members reported that they had no preparation for winter vegetable cultivation. After recession of flood water it would take 30 days to cultivate vegetables in medium high land comprising with sandy loam soil.

Conclusion and Future Implications

Conclusion

On the basis of findings it may be concluded that the prolonged persistence of flood of 1998 affected the vegetable growers severely. It hit them in the middle of the cropping season and persisted almost up to the end of the season. Therefore, the growers lost their vegetable crops a lot. Growers can produce red amaranth through out the year which is disrupted by the flood water. The growers will not be able to cultivate winter vegetables earlier for the procrastination of devastating flood because after recession of water it will take one month for soil to get back to suitable condition (jo) for vegetable cultivation.

The members had no savings in their hand at present since they could not make full profit from vegetable cultivation, they spent their savings during flood. It is understood that realizing the damage occurred from flood and difficulties of the members BRAC has taken some measures, BRAC offers subsequent loan to members with good loan repayment record.

Future implications

The leafy vegetables like red amaranth, spinach, Indian spinach require shorter period for their production. Therefore the emphasis should go with this so that vegetable production will give the growers in particular and the villagers in general the advantage of making up for nutrition deficiency through additional supply of the item to their diet. Moreover the comprehensive vegetable production will be the complementary to the cereals which are assumed to be imported from abroad by the government.

For this the growers need loan support after a massive havoc for devastating flood. In this respect we would like to urge RDP, BRAC to consider this for the rehabilitation of the growers.

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