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Resilience for Smallholder Farmers in Rural Entrepreneurship: Case from Bangladesh

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ABSTRACT

In Bangladesh, smallholder farmers—who constitute approximately 85% of the farming community—are integral to the nation's food security. However, they face numerous challenges, including limited access to finance, markets, and essential value chain services. To address these issues and enhance resilience, various organizations and initiatives have been established. This study is concerned with research that can categorize, compile and analyse a model of adaptive mechanisms generated by farmers in difficult times and during the crisis in Bangladesh, as well as their resilience in agricultural knowledge to reshape and restructure

agricultural practices. The example of the Bangla village of Salimpur is given in the research. Finally, the experiences of small-scale farming specific to the cultural context are marked in this study from an ethnic point of view. Here, the researchers have picked up the designed model and framework from the field approach to organized food production on small farms.

Keywords: farming, rural entrepreneurship, resilience, business, strategy

JEL classification: R11, M21

INTRODUCTION

The corona pandemic has destroyed thousands of new business and entrepreneurs by limiting their regular business activities” ([1], [2]). Not only business and entrepreneurs, but Corona has also directly affected all sectors of livelihood, including agriculture, services, business, migration, industrial sectors and so on. Moreover, through this study, researchers focused on the impacts of coronavirus on rural villages where agriculture is the primary means of livelihood [3]. This study also explored the adaptation resilience strategies of agricultural livelihoods during and after the pandemic period. Here, taking key aspects of agriculture as determinants in the rural environment, including food and vegetable production, planting, harvesting, marketing, value chain, this study focused on the farmer model of adaptation strategy during and after the pandemic period in the village studied.

Background and Statement of the Problem

Food and livelihood production are the fundamental aspects of agriculture. Agricultural production consists of a series of activities for growing a wide range of crops that have economic value” ([4], [2]). Since Bangladesh is geographically located in disaster-prone

areas, its agricultural sectors are largely affected by landslides, riverbank erosion, cyclones, floods and other natural disasters. The nature of agriculture in Bangladesh is based on crop production in which many farmers are paddy producers. Consequently, the lion's share of agriculture comes from marginal and small farmers and its percentage is about 70% [5]. Bangladesh consists of 25.35 million rural agricultural households, the majority of which belong to small farms of 0.05-2.49 hectares in size of the country[5]. However, with the intervention of the capitalist intention of producing for the market and surplus, the agricultural land of Bangladesh is experiencing changes in the biosphere. Massive land exploitation caused environmental changes, social degradation, deforestation, depletion of freshwater resources and chemical contamination are the results of the capitalist intention of agricultural practices. While Bangladesh was struggling against such a state of the biosphere to rethink its agricultural system, a pandemic suddenly appeared.

RESEARCH METHODOLOGY

This study was conducted based on qualitative research and the researchers approached qualitative tools and techniques for data collection and interpretation. Moreover, this study was conducted among agricultural households in Salimpur village during the period from December 2020 to March 2022. The researchers selected the respondents based on a purposive sampling method where they had a clear intention from whom they were collecting data. The basic basis of ethnographic fieldwork is primary data sources. The research focused on the participants' perspective on this study question.[7] The sample consisted of 110 respondents from different socio-economic backgrounds in Salimpur village (Table 1). In-depth interviews and case studies were used to collect data.

Table 1. Demographic structure of respondents

Respondent Category	Number of Respondent
Crop Producers	20
Poultry and Fish Producers	10
Agro-garden Farmers	10
Horticulture Producer	10
Crop Producer+ Homestead Gardeners+ Fishery's holders	10
Livestock and Cattle Producers	10
Livestock and Fishery's Holders	10
Agricultural Wage Labor	20
Agriculturalists	10
Total Number of Respondents	110

Source: Authors

FINDINGS AND INTERPRETATION OF THIS STUDY

General Overview of Study Area: Society, Culture, Ecology, and Agricultural Livelihood

As mentioned earlier, this study was conducted in the context of Salimpur village in Bangladesh. This village is strictly territory-specific, and the villagers maintain a sharp distinction in social relations based on “Mauza” (specific land area). This village has a population of about five thousand and the villagers belong to different age and gender groups, social and economic strata. The primary mode of production in Salimpur is agriculture; agricultural means of production including land, weather, technology and other inputs and agricultural production relations; the relationship between the landowner and the cultivator. Geographically, the landscape of Salimpur is a mixture of lowland, temperate and highland and hence these combined characteristics of the land make the villagers blessed and engage in agriculture as a key

engine for livelihood. The average lowland is chosen for rice cultivation, the deep lowland is for fisheries, the average highland is for rice and vegetable cultivation, and the highland is for human settlement and plantation. Due to such a combination of landscapes, Salimpur has a mix of agricultural practices, including fish farming locally known as pisciculture, field harvesting in two seasons (Amon – July to November and Boro – January to May), vegetable and other herb farming, livestock farming, poultry and other birds for market and fruit production. Both food grains, vegetables and cash crops are grown on an intensive labor basis.[12]

The social life of Salimpur is basically familial. Here, most families regulate their social life based on patrilineal descent. The economy, land, property and other resources are passed down from one generation to another based on kinship relationships[8]. Although this village is local, it has been greatly influenced by globalization and modernization. This reflection is usually seen in their daily lives. The ideological state of agriculture is that it is mainly a male occupation, but women are also involved in agriculture, sometimes more than their male counterparts in this village. Here, women are usually not allowed to go beyond the property without “purdah” (a socio-cultural belief system of Islamic ideology). Although the villagers are religious practitioners of Islamic ideology, festivals and other rituals and social life are highly controlled, determined, categorized and limited by agro-material worlds, including land, technology and other agricultural inputs.

During the pandemic, the normality of agriculture in Salimpur has been threatened. It appeared that rich farmers were labeled as moderate farmers, moderate farmers were labeled as poor farmers and poor farmers were labeled as landless, homeless and agricultural laborers in the study village. However, the village farmers are surviving on their farms and agriculture by adopting

strategies of production, consumption and distribution of agricultural goods. Considering the above socio-cultural and ecological determinants of agricultural practices in Salimpur village, this study investigated the impacts of the pandemic on agriculture, lives and livelihoods of the villagers and adaptation strategies during and after the COVID-19 period.

The Myth of Hardworking and Immunity: Farmer's View

As the Bangladeshi government declared a national emergency during the COVID-19 pandemic, people felt helpless. Even medical scientists, public health practitioners, and social activists noted that the country's farmers were experiencing a period of stress. During the pandemic, the myth of hard work was very popular among villagers. As farmers in Bangladesh, working-class people usually do hard work, especially manual labor-based activities. Such a mythology emerged in social and medical discourse to motivate the farmers of Salimpur to continue their family, agribusiness, and food supply chain. However, this myth was much more psychological than what was happening in the material worlds.

The Myth of Fate and Nature's Revenge: Farmer's Opinion

A mixture of knowledge systems exists in Salimpur village, modern and formal institutional knowledge, informal educational and socialized knowledge about nature and environment, worldview, livelihood, marriage, sex and sexuality, and human relationships. The dominant Islamic ideology is the most powerful center for the villagers' thinking. The fatally based traditional knowledge system dominates the entire aspects of the villagers. Although they resist on several other issues, at the end of decision making, they feel and value the religious belief system the most. They cultivate the land in the name of Allah and maintain all the

religious rituals associated with agriculture. But this does not mean that they do not follow a logical and scientific process of growing and harvesting crops, livestock, fishing, gardening, and horticultural practices.

Farmers' Agricultural Livelihood Adaptation Strategies

Without a doubt, the coronavirus is a striking result of the globalization process of modernization of human society and their behavior. The globalization of trade and commerce, information and entertainment, food and luxury supplies, health and sanitation among nations in different parts of the world [10]. Respondents strongly believe that the coronavirus spread as a direct byproduct of injected modernization and incomplete modernization.

In this section, the field data has been analyzed and categorized from the FGD, in-depth interview, key informant interview, and case study data. Therefore, the farmer's livelihood adaptation strategies during COVID-19 in agriculture in the village Salimpur are discussed below[6][11] (Table 2):

Table 2. Adaptation strategies during COVID-19 in agriculture

Corona Jargons	Agricultural Sector	Threats in Livelihood Sectors	Adaptation
National Emergency, Lockdown, Red Zone, Virus Shedding, Social	Food Chain Management	<ul style="list-style-type: none"> ✓ Increasing the risk of cash flow as the lockdown was going on. ✓ Buying agricultural equipment in high price but selling of agricultural products was in cheap than in compare to normal period. ✓ Growing unforeseen expense in food. 	<ul style="list-style-type: none"> ✓ Taking loans to continue farm and production; cultivation, harvesting etc. ✓ Destroying the previous accumulation for the recovery of agricultural farm.



Distancing, Quarantine, Self- Isolation, Vaccine			
	Crops Cultivation	<ul style="list-style-type: none"> ✓ High yielding seeds crisis rose due to lockdown. ✓ Buying seeds from the hand of black market high cost in price. 	<ul style="list-style-type: none"> ✓ Collecting low production seeds to survive. ✓ Herbs and other short term vegetables and grains cultivation was key to survive during COVID-19.
	Planting	<ul style="list-style-type: none"> ✓ Social exclusion process began due to lockdown and maintain the social distancing. ✓ Labor cost increased, and lack of labor involvement in planting paddy was acting agency of threats in agriculture. 	<ul style="list-style-type: none"> ✓ The land capacity of intensive farming decreased as farmers felt to the lack of labor forces. ✓ Low level engagement of labor based planting was practiced including grains cultivation.
	Harvesting	<ul style="list-style-type: none"> ✓ The retailers of agribusiness and innovation sectors failed to send the harvesting equipment into the village market due to lockdown. ✓ However, financial crisis, and low production of crops failed to adopt the latest technology. 	<ul style="list-style-type: none"> ✓ Household labor was the key way to adaptation during harvesting period. ✓ The size of average land to cultivate paddy reduced during COVID-19 pandemic to survive.

	Marketing	<ul style="list-style-type: none"> ✓ Selling and Buying was threatened during the pandemic period. ✓ Selling vegetables at a low price as those were rotted. 	<ul style="list-style-type: none"> ✓ Adopt technological reformation and the emergency of e-marketing, mobile marketing. ✓ The farmers sold their product directly to the consumer through mobile technology communication.
	Livestock Farming	<ul style="list-style-type: none"> ✓ Weight and value gained foods and other livestock health care medicine were unavailable in the village market due to lockdown. ✓ Dairy products such as meat, milk, were sold in less quantity than the normal time. ✓ As the lockdown was going on, the livestock farmers failed to take care of cattle with scientific technology and services. 	<ul style="list-style-type: none"> ✓ Farm size became smaller during the COVID-19 pandemic to operate the household. ✓ Farmer started to use the available grazing opportunities. ✓ A shift to commercial agro-farm to household agro-farm occurred due to the available household labor and post-harvesting pastureland.
		<ul style="list-style-type: none"> ✓ Due to lockdown and national emergency during COVID-19 pandemic, the farmers failed to 	<ul style="list-style-type: none"> ✓ Mobile market became the option for them. ✓ Many farmers failed to provide cash for

	Poultry and Hatchery	<p>supply their products to the consumer.</p> <ul style="list-style-type: none"> ✓ As strong social distancing taboo went on, the farmers failed to provide poultry and other hatchery products into the consumer. ✓ However, the farmers were compelled to sell their product at a low price but the feed and other ingredients were sold at a higher rate of price. 	<p>rearing poultry and hatchery due to lockdown and they reshaped their farm size.</p> <ul style="list-style-type: none"> ✓ Taking loans, public private credit assistantship was the key way to continue their farming.
	Fisheries	<ul style="list-style-type: none"> ✓ The cost of cultivation increased rapidly due to lockdown. ✓ Feed and medicines price rate increased as the village market failed to mitigate the needs. ✓ The production costs increased but profit was in margin due to lockdown. ✓ Fish culturing seemed threatened as this process required organized labor and group efforts. ✓ Due to communication and interaction restrictions, the farmers failed to 	<ul style="list-style-type: none"> ✓ Taking loans to operate the fisheries. ✓ Reshaping the fisheries size. ✓ Selling land to provide the debt.

		send the adequate products onto the market.	
	Agro-gardening	<ul style="list-style-type: none"> ✓ Agro-gardening failed to produce a good number of fruits due to lockdown. ✓ The pesticides, the labor forces were bought with high price as those were unavailable into the village market. 	<ul style="list-style-type: none"> ✓ Due to corona sensitivity, consumers were unwilling to visit the market, and producers sold the fruits with low price to the mediators. ✓ Mobile marketing was the key to sale. ✓ Taking credits to operate the garden.
	Wage Labor	<ul style="list-style-type: none"> ✓ Labor mobilization was affected due to lockdown. ✓ Due to the availability of labor in the same region, labor rate decreased drastically. 	<ul style="list-style-type: none"> ✓ Working and searching all the possible work to operate the lives and livelihood. ✓ Looking for communal and public-private assistantship and aid to survive.
	Horticulture	<ul style="list-style-type: none"> ✓ Flower gardening was the most vulnerable horticultural sector during COVID-19 because public gathering was strictly prohibited. ✓ Intra-cropping, mulching, seeds, fertilizer, pesticides, and 	<ul style="list-style-type: none"> ✓ Taking loans to operate the horticultural farms. ✓ Producing low value crops to mitigate daily needs. ✓ Reshaping the farm size to small from its previous large

		other equipment supply declined in the local market. ✓ The production cost increased but the consumers were a few in numbers.	size.
	Homestead Gardening	✓ Lockdown forced to normal communication of transportation. ✓ The buyers were not connected directly with the primary producers in the seller market. ✓ A mid-range of business class became hungry for profit during COVID-19 pandemic.	✓ Selling products at a low price as the time was hard. ✓ Planting varieties of fruits, herbs, and vegetables could meet the subsistence needs and the market demand also. ✓ Large size trees were cutting down for cash.

Data source: Fieldwork, 2020-2022

Post-COVID Agricultural Restructuring: Farmer's Views on Reshaping the Farms and Farming

In this section, the field data has been analyzed and categorized from the FGD, in-depth interview, key informant interview, and case study data[13]. Therefore, the farmer's views on post-COVID restructuration plan for agriculture resilience strategy in the village Salimpur are discussed below:

Agricultural Sectors	What Should Be Done?
Food Crops	✓ Crops diversity should be promoted as best practices of agriculture. ✓ Over exploitation of land to cultivate monocrops should be mitigated through the public-private engagement.



	<ul style="list-style-type: none">✓ Household subsistence producers of crops should be motivated by soft skill (knowledge and training), incentives, and user friendly technology.✓ The agricultural producers in small-scale society should be facilitated to uphold their dignity and esteem for as the primary food producers for the nations.✓ The syndicate of the mediatory business holder should be carried out under the law and enforcement system of Bangladesh.✓ Crops producers should be provided soft loans to restructure their agricultural farms, household agricultural farms.✓ The loan giving procedures should be conducted on the basis of necessity and reality, not the political affiliation and the nepotism.✓ Comprehensive research should be initiated in the field of crop diversity and nutritional value.
Cash Crops	<ul style="list-style-type: none">✓ Cash crops should be introduced the high technology to mitigate the industrial needs.✓ Household farms should be operated to mitigate the subsistence production of food; paddy, wheat, crop grains, and vegetables.✓ The primary aim of household farms should be filled the scale of primary foods for the family members then for the market.✓ Every homestead should be a farm house or farming pattern should be the frame of adopting variety of crops – primary for the household, then the surplus shall be provided for market.✓ Government should plan a guideline on mono-culturing; the seeds, pesticides, and crop pattern that can be harmful for the land and the environment should be banned.✓ Agriculturalists, policy initiators, and the wings of government should work for the land and environment friendly agricultural technology to protect the sustainable agriculture.
Livestock	<ul style="list-style-type: none">✓ Animal breeding technological cost should be minimized.✓ Government Veterinary services should be provided with low level of the cost of vaccine, medicine, and other soft skill support.✓ Every livestock farm should be registered and would be under the surveillance of government agricultural wings.

	<ul style="list-style-type: none"> ✓ A large number of animal farming in compare to capacity should be banned. ✓ The government should ban the cultivation of same species of cattle, goats, and sheep. ✓ The farmers and the government should be come under the agreement of sustainable farming to protect the land, environment. ✓ Household livestock farm in micro-level should be motivated. ✓ The syndicate of the livestock market should be controlled by the government authorities. ✓ The law and enforcement should be strict to control the syndicate in the peak time of cattle marketing.
Poultry and Hatchery	<ul style="list-style-type: none"> ✓ The government should take initiative to restructuring the poultry and hatchery industry. ✓ The government also should initiative new technology that can save both the interests of the farmers as well as the environment of the biosphere. ✓ Farmer's traditional knowledge on poultry and hatchery should be preserved and disseminated. ✓ The syndicate market should be under control to protect the producers and consumers obligations to each other.
Fisheries	<ul style="list-style-type: none"> ✓ The government should initiate sustainable and environmentally friendly technology. ✓ The technology should be available for the stakeholders of the fishery sector. ✓ Access to market should be operated rationally. ✓ The government should control the syndicate of fishery market. ✓ The syndicate breaks the relationship between producer and consumer. ✓ The rise and fall of price in fish market suffer the producer and the consumer, not the syndicate. The syndicate stays in a position of profits. ✓ Mono-culturing of fishes should be banned by the government to protect the fish diversity. ✓ The public and common water body should be provided fishes by the government support from where the marginal households can mitigate the need of fish.
Agro-gardening	<ul style="list-style-type: none"> ✓ To mitigate the fruits diversity and the nutrition of the people, the government should support the entrepreneurs of the agro-gardening sector. ✓ Household agro-gardening should be motivated.

	✓ Access to sustainable technology for gardening should be available for the producers.
Horticulture	<ul style="list-style-type: none">✓ Horticultural producers should motivated to operate their horticultural farms.✓ Species diversity of plants, flower, and crops should be maintained.✓ Homestead horticultural yard should be appreciated to mitigate the need of the family and the proper use of land.
Homestead Gardening	<ul style="list-style-type: none">✓ Homestead gardening should be motivated in the rural area.✓ The government and the people should be aware the benefits of having a garden around house would provide shelter, fruits, oxygen.

Data source: Fieldwork, 2020-2022

CONCLUSION

Agriculture is the backbone of Bangladesh's production system, and the pandemic has destroyed the foundations of production from 2020 to 2022. Farms and the suffering of farmers have remained unheard of. Applying an anthropological lens to the field of agriculture, this study also explores a post-pandemic plan for restructuring agriculture in Bangladesh in the context of a resilient production organization that would fit this case study of Salimpur village and the socio-cultural life of its people.

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