Value Chain Assessment of Paba ADP



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Prepared by

Avijit Poddar, Ph.D
Md. Badruzzaman Sarker
Asmar Osman
Muhammad Nazim Ud Dowlah
Md. Abu Bakkar Siddique

Human Development Research Centre
House 05, Road 08, Mohammadia Housing Society
Mohammadpur, Dhaka 1207, Bangladesh
Phone: (88 02) 811 6972, 5815 7621, Fax: (88 02) 58157620
E-mail: info@hdrc-bd.com, Web: www.hdrc-bd.com

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Avijit Poddar, Md. Badruzzaman Sarker, Asmar Osman,
Muhammad Nazim Ud Dowlah, Md. Abu Bakkar Siddique

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ACRONYMS

ADP	Area Development Programme
AI	Artificial Inseminators
BADC	Bangladesh Agricultural Development Corporation
BAU	Bangladesh Agricultural University
BBS	Bangladesh Bureau of Statistics
BLRI	Bangladesh Livestock Research Institute
DAE	Department of Agricultural Extension
DD	Deputy Director
DLS	Department of Livestock Services
FGD	Focus Group Discussion
FMD	Food Mouth Diseases
GoB	Government of Bangladesh
IEC	Information Education & Counseling
IPM	Integrated Pest Management
JSUP	Judicious and Safe use of Pesticides
KII	Key Informant Interview
MoA	Ministry of Agriculture
MoU	Memorandum of Understanding
NGO	Non-government Organization
PPR	Peste des Petits Ruminants
UAO	Upazila Agriculture Officer
ULO	Upazila Livestock Officer
VA	Value Addition
VCA	Value Chain Assessment
VS	Veterinary Surgeons

Executive Summary

Introduction

The critical bottlenecks associated with farm and non-farm businesses in Bangladesh represent weak value chain linkages between producers, traders, input service providers as well as processing and quality control. Paba ADP of World Vision has undertaken a vital initiative to conduct an in-depth study on value chain assessment of prominent farm and non-farm products/economic activities in its working area.

The **objective** of the initiative is to conduct a Value Chain Analysis of potential products from among the various products/subsectors which are practiced in ADP working area.

Methodology

The assessment has been made using qualitative (including FGD, KII and case studies) and quantitative techniques (including household survey and in-depth interview). The **sub sector selection** has been made by conducting FGDs using PRA tools (listing of products and ranking) in 12 villages. At the first step, all farm products (both crops and animal products) and economic activities produced and/or made in the area have been listed and categorized according to (i) high, (ii) medium, and (iii) low categories considering market demand. The same exercise has been performed separately considering the criteria, "helpful in increasing income". Thus two separate tables were generated in each session. The **attractiveness matrix** has been prepared using the two above-mentioned output tables. In the next step, scores (1 for lowest and 5 for highest) have been assigned for each of the listed items according to predefined 17 criteria. **Priority ranking matrix** has been prepared for Paba ADP by considering the mean of criterion-wise score of each listed items generated in all 12 FGD sessions. Priority ranking exercise yielded with 9 products. Market demand analysis of vegetable and livestock-poultry products has been conducted based on key informant interviews with DAE and DLS officials at Paba. Agriculture Census data has been also been consulted for market demand analysis. Actor mapping analysis conducted using data generated form 180 farm household survey. Key informant interviews conducted with input suppliers, market actors (paiker, goala, bepari, aratdar), service providers (DAE and DLS officials and financial service providers), and academicians.

Findings

Household size in Paba is 4 persons. 62% of population belongs to economically active category (15-59 years). About 51% population is female. Around 35% population has completed primary and above education. About 2% population identifies themselves as farmers, 15% day labor and nearly 3% involved in business. About 25% has identified as homemakers. Around 64% of households have monthly income up to Tk. 7,000 and below. Around 67% households have certain amount of savings. About 44% households receive information before buying inputs and 47% use to receive information before selling products.

Products identified for value chain analysis are onion, water gourd and chili (vegetable products), cow, chicken and pigeon goat (livestock-poultry products), community level tailor, petty trading (mobile cloth vendors, rural market fertilizer vendors, mobile utensil vendors etc) and community level grocery (non-farm economic activities).

Analysis shows that milking cow rearing using traditional technology yields income amounting Tk. 44 thousand while, rearing cost is Tk. 28 thousand and gross profit as percentage of rearing cost is 60%. Income from rearing 20 pigeons in a traditional manner for a cycle of 1 year is Tk. 7,580, where cost of rearing is Tk. 4,117. Gross profit as percentage of rearing cost is 84%. Income from rearing scavenging 20 chickens for a cycle of one year is nearly Tk. 13 thousand and rearing cost amounts to Tk. 5,567. The gross profit over cost is 135%. Although pigeon rearing appears as apparently lucrative, after consultation with DLS experts the study team excludes pigeon rearing from the suggested value chain.

For onion, water gourd and chili, gross profit against production cost respectively are 87%, 187% and 56%. The same for community level tailoring, petty trading, and community level grocery are (-) 14%, 6%, and 17% respectively.

Discussions

Value chain analysis reflect that agriculture and livestock (including poultry products) products generates high profit, creates more employment and higher income for most of the actors. It also creates linkage between urban and rural areas.

The value chain analysis conducted in Paba shows that nonfarm activities (identified through attractiveness matrix) generates substantially lower profit compared to agriculture and livestock-poultry products. The scope of generating employment and income is also limited. Very limited number of actors is involved in chain. Thus, these activities may be considered as non-prospective for further development of value chain. Considering programmatic interest in developing value chain of non-farm activities,

For other products, World Vision may facilitate popularizing cultivation and/or rearing of the selected earlier products (onion, water gourd, chili, cow, chicken and goat) among farmers.

As mentioned earlier, farmers are highly dependent on traditional cultivation/rearing technology. World Vision may facilitate introduction of improved product-specific technologies in harmonious coordination and close cooperation with DAE and DLS.

Due to absence of community level frontline workers, Bangladesh suffers from various problems in introducing improved technologies. World Vision may consider developing such workers in each community in cooperation with GoB and NGOs working in the field of agriculture and livestock-poultry.

Access to initial capital and subsequently to other necessary financial services is a major constraint for small and marginal farmers. World Vision may be involved in advocacy with GoB and banking sector (including Bangladesh Bank) for introducing especially designed financial services package for small farmers producing vegetable, livestock and poultry products.

Recommendations

In light of findings presented above, Paba ADP may undertake a pilot project "Developing Value Chain of onion, water gourd, chili production and cow, chicken and goat rearing in Paba". The project needs to consider the following:

- Mobilize the resource poor vegetable producing and livestock-poultry rearing households and form farmers group (one in each project village). Recommended composition of such group is : 75% female and 25% male members
- Provide groups' orientation about the project and motivation regarding benefits of vegetable production and livestock-poultry rearing.
- Organize special motivation sessions (including community level informal meetings) using easily understandable IEC materials on how to prevent the horticulture crops and livestock-poultry from various diseases.
- Organize detail training on vegetable production technology using high yielding variety and high quality seeds, applying judicious doses of fertilizer, pesticides and IPM as recommended by DAE. It is also necessary to include appropriate knowledge on plot preparation, de-weeding, seedling preparation and irrigation,
- Organize detail training on upgraded livestock-poultry rearing technology using high productive breeds, supplementary feeding, hygienic shade, prophylactic immunization and treatment of diseases.
- The animal shade should be constructed maintaining a possible safe distance from living structure. Consultation needs to be made with DLS experts in this regard.
- For cow rearing the hard size should be 2 milking cows (*deshi)* and the rearing cycle should be 3 years. Artificial insemination should be made in each occasion for making cows pregnant.
- For chicken rearing the birds procured should be of 13 weeks, flock size should be 20 birds. Sonali or Fayoumi breeds of chicken are suitable for Paba, and the breed is available in nearby GoB poultry farms.
- For goat rearing the entire community should be immunized from PPR and prophylactic de-warming medication administered. The hard size should be 5 female goats (black Bengal) and rearing cycle is 3 years.
- Provide training to all farm households involved in vegetable production and livestock-poultry rearing, and particularly on marketing skills (including negotiation skills)
- Provide orientation to all farm households involved in vegetable production and livestock-poultry rearing, and on benefits of bulk input buying
- Facilitate access to all farm households involved in vegetable production and livestock-poultry rearing, and also to various service providers including financial survives.
- Facilitate access of all farm households involved in vegetable production and livestock-poultry rearing groups to distant markets so that producers get higher price.
- Paba ADP may facilitate a pilot project on mini apparel producing traditional dresses for women and children. Alternatively The ADP may consider development of mosquito net production value chain. Linkage with respective input suppliers and marketing outlets needs to be developed.