Value Chain Assessment of Dhamoirhat ADP



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ACRONYMS

ADP	Area Development Programme
AI	Artificial Inseminators
BADC	Bangladesh Agriculture Development Corporation
BBS	Bangladesh Bureau of Statistics
BLRI	Bangladesh Livestock Research Institutes
DAE	Directorate of Agricultural Extension
DD	Deputy Director
DLS	Directorate of Livestock Service
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
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. Dhamoirhat 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 Dhamoirhat 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 Dhamoirhat. 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 Dhamoirhat is 3.8 persons. Nearly 64% of population belongs to economically active category (15-59 years). About 49% population is female. Around 31% population has completed primary and above education. About 9% population identifies themselves as farmers, 14% day labor and 3% involved in business. About 27% has identified as homemakers. Near about 65% of households have monthly income up to Tk. 7,000 and below. Around 56% households have certain amount of savings. About 31% households receive information before buying inputs and 46% use to receive information before selling products.

Products identified for value chain analysis are parbal, bitter gourd and green chili (vegetable products), cow, goat and chicken (livestock-poultry products), bamboo made handy craft production, community level tailor, 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. 26 thousand and gross profit as percentage of rearing cost is 69%. Income from rearing 5 goats in a traditional manner for a cycle of 1 year is Tk. 23 thousand, where cost of rearing is Tk. 13 thousand. Gross profit as percentage of rearing cost is 78%. Income from rearing scavenging 20 chickens for a cycle of one year is nearly Tk. 12 thousand and rearing cost amounts to Tk. 4 thousand. The gross profit over cost is 173%.

For parbal, bitter gourd and green chili gross profit against production cost respectively are 68%, 55% and 73%. The same for bamboo made handicrafts, community level tailoring and community level grocery are 23%, (-) 5% and 27% 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 Dhamoirhat 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.

For other products, World Vision may facilitate popularizing cultivation and/or rearing of the selected earlier products (parbal, bitter gourd, green chilies, cow, goat and chicken) 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

For enhancing value chain of parbal, bitter gourd, green chili production and cow, goat and chicken rearing, Dhamoirhat ADP may undertake a pilot project "Developing Value Chain of parbal, bitter gourd, green chili production and cow, goat and chicken rearing in Dhamoirhat". The pilot project needs to be constituted of following components/elements:

Under the stated findings 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 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 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.
- 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 Dhamoirhat, and the breed is available in nearby GoB poultry farms.
- 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.