

APRACA FinServAccess Programme

Value Chain Financing in Agriculture: Best Practices, Innovations and Experiences in Bangladesh



APRACA FinServAccess Publication: 2015/4a

Value Chain Financing in Agriculture: Best Practices, Innovations and Experiences in Bangladesh

Md. Sirajul Islam

An APRACA FinServAccess Publication with the Special Sponsorship of
the International Fund for Agricultural Development

Published by: Asia-Pacific Rural and Agricultural Credit Association (APRACA)

Distribution: For copies, write to:

The Secretary General
Asia-Pacific Rural and Agricultural Credit Association (APRACA)
Room A303, Bank for Agriculture and Agricultural Cooperatives (BAAC)
469 Nakhonsawan Road, Dusit, Bangkok 10300, Thailand
Tel: (+662) 282-0693
Fax: (+662) 280-1524
E-mail: apraca@apraca.org
Website: www.apraca.org

Secretary General: Chamnong Siriwongyotha

Project Manager: Marlowe U. Aquino

E-copy: The report in PDF can also be downloaded from the APRACA website.

Printed: August 2016

ISBN 978-616-8073-01-8

This report is published by APRACA under the auspices of the IFAD-supported APRACA FinServAccess Project.

Opinions expressed by the experts and documenters do not necessarily represent the official views of APRACA or of IFAD.

This report is published during the incumbencies of Mr. Shitangshu Kumar Sur Chowdhury (APRACA Chairman), Mr. Shiba Raj Shrestha (APRACA Vice-Chairman), Mr. Chamnong Siriwongyotha (APRACA Secretary General) and Dr. Marlowe U. Aquino (FinServAccess Project Manager).

Preface

The need to share the innovations, practices, lessons learnt, and experiences of the Asia-Pacific Rural and Agricultural Credit Association (APRACA) member institutions is a continuous process within the rural finance and development network in the region. This is done through several means which enables every institutional member including its officers, partners and most especially the clientele to be technically equipped, financially secured and developmentally prepared and sustainable.

With the support of the technical experts and practitioners across the region, APRACA has boosted its programmes and activities in improving the institutional development and capacities of its members in research and development and knowledge management.

One of the important aspects being supported by APRACA in rural finance and development is the documentation of agricultural value chain finance (AVCF) strategies, innovation, interventions and experiences in the field. For the past years, AVCF experiences from selected countries set the pace in knowledge acquisition and exchange. It has allowed and encouraged intellectual discussion to solicit additional ideas, insights and perspectives.

This year, APRACA through the IFAD FinServAccess Grant Project continues to support the documentation of AVCF to strengthen its knowledge-based at the regional level. We heartily express our gratitude to IFAD, our institutional members and their clientele for documenting and sharing their work.

This document is part of a series of publication meant to support the AVCF training modules/resource book as a means for teaching-learning tool for key players, practitioners and stakeholders in rural finance and development. The countries documented include Bangladesh, Lao PDR, Malaysia, Pakistan and Nepal.

We hope this document will be useful to enhance and strengthen capacities of those interested to learn further the aspect of agricultural value chain finance within strategic locations in increasing productivity, profitability and sustainability especially in the countryside.

Acknowledgements

This publication is based on a study which was commissioned by the Asia-Pacific Rural and Agricultural Credit Association (APRACA) through the International Fund for Agricultural Development (IFAD) grant project, the FinServAccess project. It was designed to meet the needs of the growing demand of domain knowledge on financing agriculture value chains in the Asia-Pacific region focusing on Bangladesh.

We would like to express our sincere thanks to the following in making this wonderful output possible:

- Mr. Shib Narayan Kairy, Chief Financial Officer of BRAC agreeing, approving and providing his continual support and encouragement to the research team headed by Dr. Md. Sirajul Islam, head of the Agriculture and Food Security Programme and Mr. Md. Julfiker Rahman, agronomist, in collecting necessary data from different institutions;
- Various departments, institutions and ministries of Bangladesh particularly the Bangladesh Bank, Bangladesh Rural Development Board, Department of Agriculture Extension and Palli Karma Sahayak Foundation (PKSF) for sharing their experiences and cases highlighting the best practices in agricultural value chain finance;
- The International Fund for Agricultural Development (IFAD) for its financial support extended to the research team and the publication of this document; and
- The readers/users of this output as more and more stakeholders and practitioners take part in having an intellectual discussion on the aspect of value chain finance in agriculture not only in Bangladesh but other countries as well. We encourage you to question further in order that we can serve and provide the most appropriate and relevant practices in creating opportunities in rural finance and development across our region and the whole world.

Executive Summary

Sustainably increasing agricultural productivity and economic development requires better access to diversified financial services. To improve the livelihood of the farmers it is very important to make financial services accessible to the rural community. A number of factors have constrained the development of financial services to agricultural sectors in developing countries: the higher transaction costs associated with dispersed populations and inadequate infrastructure; the length of the planting/maturation cycle and higher risks (e.g., weather) inherent in agriculture; and asymmetry of information and the lack of appropriate technology for rural populations to access information. Even where financial services have been available previously, products often failed because they were designed without adequate recognition of the needs and capacities of rural households and agricultural producers. Today, improved application of technology, public-private partnerships, and greater private-sector involvement in the supply and value chains finance in agriculture is increasing access to financial services of rural peoples. Different financial and government institution has taken a number of initiatives to increase flow of funds in rural areas through agricultural credit programme and SME loans under intensive financial inclusion strategies. Private-sector actors are working in partnership with governments and donors to find new ways to overcome financial obstacles to upgrading and scaling up supply and value chain finance in agriculture of Bangladesh. Many NGOs and government institution already started different types of value chain finance programme to remove poverty, create employment opportunity and sufficient food security. Agriculture value chain finance is also very important for creating skilled manpower in rural areas and women empowerment.

Three best identified agricultural value chain finance in Bangladesh has been discussed in the study. These are: i) Second crop diversification project funded by Asian Development Bank (ADB) and implemented by Department of Agricultural Extension (DAE) and BRAC; ii) Akti Bari Akti Khamar (One house one farm) of Bangladesh Rural Development Board (BRDB) and iii) Kuwait Goodwill Fund (KGF) funded by Kuwait Fund for Arab Economic Development (KFAED) and implemented by Palli Karma Sahayak Foundation (PKSF).

Acronyms

ADB	Asian Development Bank
AVCF	Agricultural Value Chain Finance
BB	Bangladesh Bank
BKB	Bangladesh Krishi Bank
BRDB	Bangladesh Rural Development Board
BRKB	Bangladesh Rice Knowledge Bank
BRRRI	Bangladesh Rice Research Institute
BSBL	Bangladesh Samabay Bank Limited
CRR	Current Recovery Rate
DAE	Department of Agricultural Extension
FAO	Food and Agricultural Organization
FB	Foreign Bank
FY	Fiscal Year
GDP	Gross Domestic Product
KFAED	Kuwait Fund for Arab Economic Development
KGF	Kuwait Goodwill Fund
MFI	Microfinance Institution
NCDP	Northwest Crop Diversification Project
PCB	Private Sector Commercial Bank
PKSF	Palli Karma Sahayak Foundation
RAKUB	Rajshahi Krishi Unnayan Bank
SAAO	Sub-Assistant Agricultural Officer
SCDP	Second Crop Diversification Project
SME	Small and Medium-sized Enterprises
SOCB	State Owned Commercial Bank
TMSS	Thengamara Mohila Sabuj Sangha
ToT	Training of Trainers
VCF	Value Chain Finance
VDO	Village Development Organization

Table of Contents

Title Page	i
Preface	iii
Acknowledgements	iv
Executive Summary	v
Acronyms	vi
Table of Contents	vii
List of Tables and Boxes	viii
Chapter 1 INTRODUCTION	1
1.1 Concept of agricultural value chain finance	3
1.2 Importance of agricultural value chain finance	4
1.3 Bangladesh actors in value chain finance in agriculture	4
Chapter 2 BEST PRACTICES AND INNOVATIONS OF BANGLADESH	5
2.1 Case 1 – Value chain finance: Second Crop Diversification Project	5
2.2 Case 2 – Value Chain Finance: Akti Bari Akti Khamar (One House One Farm)	9
2.3 Case 3 – Value Chain Finance: Kuwait Goodwill Fund	12
Chapter 3 INNOVATIONS AND STRATEGIES ON AVCF	15
3.1 BRAC milk product	15
3.2 Sunflower for edible oil	16
3.3 BRAC cold storage	17
3.4 Open water fish culture	18
3.5 BRAC poultry and chicken	19
Chapter 4 IMPLICATIONS OF RURAL FINANCE TO AGRICULTURE AND RURAL DEVELOPMENT	22
Bibliography	23
Appendices	24

List of Tables and Boxes

List of Tables

Table 1	Agricultural Credit Performance of Banking Sector	24
Table 2	Agricultural Credit Performance of State Owned Commercial Banks (SOCB's)	24
Table 3	Agricultural Credit Performance of Bangladesh Krishi Bank (BKB)	25
Table 4	Agricultural Credit Performance of Rajshahi Krishi Unnayan Bank (RAKUB)	25
Table 5	Agricultural Credit Performance of Foreign Banks (FBs)	25
Table 6	Agricultural Credit Performance of Domestic Private Sector Commercial Banks (PCBs)	26
Table 7	Agricultural Credit Performance of Bangladesh Rural Development Board (BRDB)	26
Table 8	Credit Performance of NGOs	26

List of Boxes

Box 1	Bangladesh Bank	5
Box 2	Department of Agricultural Extension	7
Box 3	BRAC	7
Box 4	Bangladesh Rural Development Board (BRDB)	9
Box 5	Palli Karma Sahayak Foundation (PKSF)	12

CHAPTER 1

Introduction

Global food demand is increasingly driven by population, economic growth and urbanization, particularly in developing countries. This trend is expected to continue for the next decades reaching a 70 percent increase in total food demand by 2050. At the same time, dietary patterns are changing towards more livestock products, including fish, vegetable oils and, to a lesser extent, sugar; a trend that is accentuated by the increasing homogeneity of life habits between urban and rural population facilitated by communications technology. These three food groups together now provide 29 percent of total food consumption in the developing countries. Their share is projected to rise further to 35 percent in 2030. However, these changes are not universal and wide inter-regional and inter-country diversity remains in the share of different commodity groups in total food consumption. The new consumption patterns also imply a larger role for processed foods which create new opportunities for value-added and income-generating activities (FAO 213). Asian continent is not an exception to these global phenomena. While the supply side (both quantity and quality of production) and agriculture value chain development has not been able to keep pace with time, the demand side trend in the emerging and developing economies of the Asia have been quite attractive (Das and Aquino 2013).

According to Thapa and Gaiha (2011), 87 percent of the world's 500 million small farm households are in Asia and the Pacific region. Bangladesh agriculture is dominated by small and marginal farm household with an average farm size of less than 0.5 hectare of land. It was almost 1.5 ha in 1960s and 1.0 ha in 1980s. Accordingly the number of farm households increases over the time. Presently, around 16 million farm households remain in Bangladesh compare to only 5 million farm households in 1960s. There is also a significant occupational changes occurred in farm families in Bangladesh due to the sustainability issues. Involvement of farm household in non-farm activities leading to economic benefits increases over the time.

Bangladesh is primarily an agrarian country. Most of the people of the country directly or indirectly depend on agriculture. Rural people are more involved in this sector compared to urban people. Farmers are adopting modern technologies replacing traditional systems in crop production, livestock rearing and aquaculture activities. Agricultural holdings in Bangladesh are generally small. Through cooperatives the use of modern machinery is gradually gaining popularity. Rice, Jute, Sugarcane, Potato, Pulses, Wheat, Tea and Tobacco are the principal crops. The crop sub-sector dominates the agriculture sector contributing about 72 percent of total production. Fisheries, livestock and forestry sub-sectors are 10.33 percent, 10.11 percent and 7.33 percent respectively. They also get more profit using modern technology. Now a day's different types of modern machineries are being introduced in agricultural sector. Rural farmers need more financial access to purchase machineries and inputs. Most of the farmers in Bangladesh are poor. Due to lack of money sometimes they are not able to use necessary inputs as and when necessary. Adequate availability of credit on time is an important requirement for the investors, particularly under conditions of scarcity of resources and uncertainty. Convenient and safes-saving facilities are perhaps even more important to smooth out the peaks and troughs in incomes and expenditures. Lack of savings facilities also force families to rely on inefficient, inconvenient and costly alternatives. Agricultural credit is a solution for this perspective (Islam et al, 2014). In this situation, they try to manage money in different ways. Many farmers take credit with a high interest from different bad peoples. Some farmers who are little literate or conscious, they take credit from different microfinance institution and met up their emergency requirement. Numerous new or reformed financial institutions have emerged; substantial gaps persist in many rural financial markets. These gaps relate to scarce provision of formal agricultural credit to small farmers, a paucity of medium- and long-term lending, and few deposit facilities in rural areas. The absence of these financial services has important implications for agricultural development and for small farm households.

Major segments of agriculture cannot modernize without the support of a strong financial system; an increasingly capital intensive agriculture requires access to working capital and seasonal loans along with medium- and long-term credit for on-farm investments. Likewise, many poor people in rural areas are disadvantaged by financial markets that perform poorly. They have less opportunity to climb out of poverty by accumulating financial savings and they have no access to formal credit because the financial system is not innovative or sufficiently efficient to reduce transaction costs and to provide small clients with access to affordable and durable financial services. A more efficient financial system would help accomplish the dual objectives of boosting production and easing rural poverty. Rural banking and microfinance are two important terms from our country's economy perspective. The vast populations have remained unutilized due to lack of education and training. Since our economy is agro based economy and major portion of our population are living in the rural area so to ensure balanced geographical growth as well as growth of GDP and to remove poverty, organized sector can play a vital role through rural banking and microfinance (Tahera, 2015).

Agriculture is the single largest producing sector of the economy since it comprises about 18.6 percent of the country's GDP and employs around 45 percent of the total labor force in Bangladesh (Wikipedia, 2015). The performance of this sector has an overwhelming impact on major macroeconomic objectives like employment generation, poverty alleviation, human resources development and food security. Previous research suggests that agricultural income growth is more effective in reducing poverty than growth in other sectors because: 1) the incidence of poverty tends to be higher in agricultural and rural populations than elsewhere, and 2) most of the poor live in rural areas and a large share of them depend on agriculture for a living (Dalila and Dewbre, 2010).

The global food system today is beset by serious challenges and risks: production and prices have become more volatile; hunger and poverty levels remain high, particularly among farming communities; and unsustainable practices exacerbate environmental challenges. By 2050, the world's population will have risen to 9 billion (World Economic Forum, 2015). Feeding this population will require substantial changes to ensure the production, distribution and consumption of sufficient nutritious and sustainably produced food. Farmers are the key player of agriculture. To meet up their demand in different agricultural activities value chain finance (VCF) is very important. With primary producers (farmers), several other players drive the AVCF and play important roles; these include dealers in agri-commodities and agri-inputs, food processors, retailers, support service institutions, banks and financial institutions. Each of these players may be operating in the AVCF at varying scales with investments of only a thousand dollars or even less or outlays of more than several million dollars. They operate along the VC, with linkages into one another. Key participants in an agricultural value chain (AVC) are: producers, agri-input dealers, aggregators, wholesalers and retailers (African Development Bank, 2013). Agriculture remains an important means of alleviating poverty, but shortage of finance can constrain its development. At the same time, agriculture is evolving towards a global system requiring high-quality, competitive products, and is organized in value chains which often exclude smallholders. Value chain financing in agriculture offers an opportunity to increase the scope, and reduce the cost and risk of financing to agriculture. It can also help value chains to be more inclusive, by making resources available for smallholders to be integrated into higher value market opportunities.

Bangladesh Bank (BB) has taken a number of initiatives to increase flow of funds in rural areas through agricultural credit programme and SME loans under its intensive financial inclusion strategies. BB has instructed all private and foreign banks to disburse at least 2 percent of their total loan and advance as agricultural credit. Agricultural diversification by disbursing more resources in both crop and non-crop sectors and crop intensification by adding new varieties is essential in order to enhance agricultural growth. BB also pursues inclusive monetary policy for serving unbanked people to achieve sustainable economic growth. In FY 2015, annual agricultural credit disbursement target has been fixed at Tk 15,550.00 crore which is Tk 955.00 crore or 6.54 percent higher than previous year's credit disbursement target of Tk 14,595.00 crore. In February 2015, actual agricultural credit disbursement by

all scheduled banks under annual agricultural credit programme stood at Tk 1,425.66 crore. During July-February of FY 2015, total agricultural credit disbursement stood at Tk 9,914.10 crore. The target attainment up to February 2015 was 63.76 percent. Recovery of agricultural credit stood at Tk 1,333.84 crore. During July-February of FY 2015 total agricultural credit recovery stood at Tk 10,395.84 crore. Banks did not avail of any refinance facilities from Bangladesh Bank in February 2015. An amount of Tk 30.00 crore was recovered against past refinance loan due from different banks and institutions. During July-February of FY15 these institutions availed Tk 500.00 crore refinance and recovered Tk 269.09 crore. Different NGOs disbursed Tk 4,528.67 crore as microcredit and recovered Tk 4,147.21 crore. Up to February 2015, their outstanding balance stood at Tk 29,447.34 crore where as the overdue stood at Tk 913.91 crore (Bangladesh Bank, 2015).

In the above context the objectives of the present study were:

- To find out who are involved in value chain finance in Bangladesh
- To find out the best practices and innovations on AVCF in Bangladesh

1.1 Concept of Agricultural Value Chain Finance

Value chain finance is defined as the flows of funds to and among the various links within a value chain. Stated another way, it is any or all of the financial services, products and support services flowing to and/or through a value chain to address the needs and constraints of those involved in that chain, be it a need for finance, a need to secure sales, procure products, reduce risk and/or improve efficiency within the chain. Value chain finance is a comprehensive approach which looks not only at the direct borrower but rather analyzes the value chain and those within it, and their linkages in order to best structure financing according to those needs. The linkages also allow financing to flow up and down the chain. For example, inputs can be provided to farmers and repaid directly from the sale of the product without having to go through a traditional loans process (FAO, 2015). AVCF can be defined as the flows of funds to and among the various links within the agricultural chain such as production, processing, storage and marketing.

A useful starting point for understanding value chain financing in agriculture is with three general definitions:

1. Value chain – the set of actors (private, public, and including service providers) and the sequence of value-adding activities involved in bringing a product from production to the final consumer. In agriculture they can be thought of as a ‘farm to fork’ set of processes and flows.
2. Value chain analysis – assessment of the actors and factors influencing the performance of an industry, and relationships among participants to identify the driving constraints to increased efficiency, productivity and competitiveness of an industry and how these constraints can be overcome.
3. Value chain finance – financial services and products flowing to and/or through value chain participants to address and alleviate driving constraints to growth.

To summarize, the key aspects of the value chain definitions for agriculture are:

- Value chains – multiple, linked actors and sequential, value-adding activities.
- Value chain analysis – assessment of actors, relationships, constraints and opportunities.
- Value chain finance – finance to address the constraints and opportunities, both through the value chain, and to and/or because of the value chain (Miller and Jones, 2010).

Value chain finance comprises the full range of financial services – loans, savings, insurance, and payment and money transfer services – needed, offered, or used in agricultural sector by household and enterprises.

Generally Agricultural finance refers to financial services ranging from short-, medium- and long-term loans, to leasing, to crop and livestock insurance, covering the entire agricultural value chain – input supply, production and distribution, wholesaling, processing and marketing.

1.2 Importance of agricultural value chain finance

- To developed different types of agricultural farm such as crop production, poultry, fisheries and livestock farm
- To developed and sustain different types of agricultural industry
- To fulfill farmers need at proper time

1.3 Bangladesh Actors in Value Chain Finance in Agriculture

In value chain finance of agriculture there are many institutions and informal sources are involved in Bangladesh. A large numbers of NGOs (BRAC, ASA, PROSHIKA, TMSS etc.), State Owned Commercial Bank (SOCB) (Sonali Bank, Rupali Bank, Agrani Bank etc.), Agricultural Bank (Bangladesh Krishi Bank, Rajshahi Krishi Unnayan Bank), Specialised Commercial Bank (Ansar-VDP Development Bank, Islami Bank Limited, Pubali Bank Limited, Uttara Bank Limited etc.), Rural Development Institutions (BRDB, PKSf etc.), informal sources (friends, relatives, moneylenders etc.) are directly involved with AVCF by giving agricultural credit.

From FY 2002 to FY 2012, disbursement of agricultural credit in banking sector has gradually increased and overdue gradually decreased (Table 2). In FY 2012 banking sector disbursed 131.32 billion taka as agricultural credit and the overdue was 23.30 percent. State owned commercial banks have significantly been meeting the credit needs of the rural farmer. In FY 2012 SOCBs distributed 24.33 billion taka (Table 3) as agricultural credit which was 18.53 percent of the total disbursed credit by banking sectors. The role of Bangladesh Krishi Bank (BKB) and Rajshahi Krishi Unnayan Bank (RAKUB) is noteworthy. BKB is the prime source of banking sector agricultural credit which solely distributed 47.33 billion taka (Table 4) in FY 2012 which is 36.04 percent of total banking sector credit and RAKUB disbursed Tk 11.51 billion (Table 5) as agricultural credit which is 8.76 percent of total banking sector credit. Domestic and Foreign commercial banks have recently been emerged as another important sources of banking sector credit after a recent directive by Bangladesh Bank requires domestic and foreign commercial banks to invest in agricultural sector. Agricultural credit distribution of foreign banks was 4.82 billion taka (Table 6) and domestic private sector commercial banks was 43.33 billion taka (Table 7) which constitutes 36.67 percent of the total agricultural credit distributed in fiscal year 2011-2012. Another important think of FBs agricultural credit is there was not any overdue. Rural Development institutions also play very important roles of agricultural credit. BRDB disbursed 7.50 billion taka (Table 8) in the FY 2011 and the overdue was 36.71 percent. Now NGOs are in a significant role in rural economic upliftment by generating growth and creating employment through agricultural credit disbursement. In FY 2012 they disbursed 293.65 billion taka (Table 9) which was 223.61 percent higher than the agricultural loan disbursed from the banking source and their overdue is also lower than the banking sector of Bangladesh (Alauddin and Biswas, 2014).

CHAPTER 2

Best Practices and Innovations of Bangladesh

The methodology of selecting the cases was mainly the desk review and some cases the key informant discussions. The secondary data available in various sources were used. Some document was also collected from the Bangladesh Economic Review and from Bangladesh Perspective Plan of the government of Bangladesh. There are many programmes or practices are involved in AVCF of Bangladesh. To find out the best practices or innovations we have considered some criteria. The criteria are given below:

- Change in income of the farmers
- Access to financial services by rural people
- Food Security by increasing productivity
- Employment opportunity
- Area coverage
- Use of modern technology
- Capacity building and training opportunity
- Women employment as well as community empowerment
- Market establishment
- Risk management

In line with the above mentioned criteria three best practices of AVCF are described below:

2.1 Case 1 – Value chain finance: Second Crop Diversification Project

The best practice/innovation on value chain finance in agriculture in Bangladesh is Second Crop Diversification Project (SCDP). This project funded by Asian Development Bank and implemented by Bangladesh Bank (Box 1) and Department of Agricultural Extension (Box 2). Bangladesh Bank and Asian Development Bank signed the agreement where Eastern Bank Ltd. and Basic Bank Ltd. Set off role as wholesale banks, BRAC (Box 3) played as the microcredit participant.

Box 1. Bangladesh Bank

Bangladesh Bank, the central bank of the country and apex regulatory body for the country's monetary and financial system. It performs all the functions that a central bank in any country is expected to perform. Such functions include maintaining price stability through economic and monetary policy measures, managing the country's foreign exchange and gold reserve, and regulating the banking sector of the country. Like all other central banks, Bangladesh Bank is both the government's banker and the banker's bank, a "Lender of Last Resort". Bangladesh Bank, like most other central banks, exercises a monopoly over the issue of currency and banknotes. Except for the one- and two-taka notes, it issues all other denominations of Bangladeshi Taka. Other functions include credit control, acting as a clearing house, job creation, agricultural development, SME development, industrial development, and development of natural resources.

In Bangladesh 75 percent of the population directly or indirectly engaged in agriculture. Almost all of the 13 million farm families of the country grow rice. About 75 percent of the total cropped area and over 80 percent of the total irrigated area is planted to rice (BRKB, 2015). The emphasis placed on rice production has resulted in increased dependency on imported foodstuffs, particularly fruit, which remains unaffordable to many poor consumers. Therefore, increase in high-value crop production including fruit is of critical importance for reducing imports and enhancing affordable and varied nutritious diets for the poor. The Government is promoting diversification in agriculture by weaning farmers away from their reliance on low-value staple food grains and value commodities with the help of modern and appropriate technologies, wider access to information and finance and more efficient rural markets. The project conforms to the Government's priority agenda in the national poverty reduction strategy with agriculture sector development and diversification into high value crops a key area of strategic focus under rural development activities. High value crops are defined as agricultural crops which will give a higher rate of return per hectare than high yielding winter (Boro) rice. With an improving economic situation and consequent income growth, particularly among the growing urban middle class, the market demand for high value crops is expected to increase. High value crops production, value addition and efficient marketing are acknowledged as key drivers in meeting consumer demand, raising the incomes of poor farmers, and contributing to improve livelihood, food security and balanced nutrition.

- Participant received rural credit with low interest and easy condition.
- Increased high value crops production and commercialization.
- Reduced high value crops post harvest losses, improved product quality, value addition and enhance market efficiency.
- Enhance capacity of public sector institutions and participating partners supporting farmers to increase their incomes.
- Increased participation of women in commercial agricultural activities.



SCDP is a "follow on" project to the Northwest Crop Diversification Project (NCDP). NCDP implemented in 61 Upazilas of 16 districts of Northwest region with the funding of Asian Development Bank (ADB) from the tenure of 2001-2009. At present SCDP is working in 52 Upazilas of 27 districts of southwest and northwest region for the tenure of 2010-2016 with the funding of ADB.

Box 2. Department of Agricultural Extension

Department of Agricultural Extension is conducting the agriculture extension activities all over the Bangladesh. The vision of the Department of Agricultural Extension is to provide eco-friendly, safe, climate resilient, sustainable productive good agricultural practices and sustaining natural resources to ensure food security as well as commercial agriculture with a view to accelerating socio-economic development of the country. The mission of the Department of Agricultural Extension is to provide efficient, effective, decentralized, location specific, demand responsive and integrated extension services to all categories farmer in accessing and utilizing better know how to increase sustainable and profitable crop production; thereby ensure socio-economic development of the country.

Box 3. BRAC

BRAC is the largest non-governmental development organization in the world, measured by the number of employees and the number of people it has helped. BRAC has been working since 1972. The vision of BRAC is “A world free from all forms of exploitation and discrimination where everyone has the opportunity to realize their potential.” The mission of BRAC is to empower people and communities in situations of poverty, illiteracy, disease and social injustice. Its interventions aim to achieve large scale, positive changes through economic and social programmes that enable men and women to realize their potential.

BRAC has developed support services in the areas of human rights and social empowerment, education and health, economic empowerment and enterprise development, livelihood training, environmental sustainability and disaster preparedness. BRAC operates social enterprises that are strategically connected to people development programmes, and form crucial value chain linkages which increase the productivity of their members’ assets and labor, and reduce risks of their enterprises. These enterprises, ranging from agriculture to handicrafts, also help to make increasingly self-reliant.

The beneficiaries of this project are the farmers who are interested to produce high value crops and also participate in agricultural training willingly. Beneficiaries are marginal, small and medium farmers with land holdings up to 3 hectares.

SCDP project has improved the access and delivery of rural finance services with different way. SCDP project:

- Identified and organized around 240,000 beneficiaries farmers with 50 percent women
- Provided rural credit for high value crops (50 percent of the borrowers are women in number). Credit distributed Tk 175.18 crore among 175,000 farmers.
- Developed modality and documents to ensure that wives and husbands co-sign all loan agreements
- Provided credit to women farmers individually or jointly for value addition activities
- Impart training to farmers on lending and assessment procedure and credit management (50 percent women)
- Support female farmers to be under supply contract with large farmers, traders, seed merchants and processors
- Oriented 10,000 women group members in post-harvest handling techniques and involved them in the bargaining and negotiation aspects of marketing

- Support women to participate in ownership and management of on-farm small scale infrastructures including in the signing of contractual documents
- Trained farmers on high value crop production technology (50 percent of the trainees are women)
- Supported demonstration plots on high value crops (40 percent of the demonstration plots are done by women)
- Organized farmers field days (1,000 field days and 50 percent participants are women).
- Arranged farmer motivational tours in neighboring locations (40 percent are women).
- Organize agricultural fairs (30 percent stalls for women).
- Included women farmers in training on floriculture and nursery development – 30 percent women in 100 courses.
- Impart awareness training for women in climate change adaptation options and strategies with 50 percent women participants.
- Arrange pilot field testing of climate change resilient crops, and, particularly their use in household gardens (50 percent of participants to be women).

The benefits of SCDP project are:

- Extend the area of high value crop production to 50,000 ha in Southwest and Northwest region of the country.
- Increased marginal, small, and medium farmers' incomes through improved efficiency and value addition of High Value Crop production to approximately 240,000 high value crops producing households in the project areas.
- Improved rural income opportunities for the poor including women; by increasing around 18,000 person years of additional employment opportunities.
- Empower rural women in commercial agriculture activities roughly by involving additional 10 percent women in the localities.
- Enhanced food security, safety, and nutrition through reduction of post harvest loss by around 10 percent and provision of credit to deserving farm households.

SCDP has improved the performance and strength of rural institutions. It has created a partnership between training organizations and microfinance institutions. How SCDP has improved the performance of different institution has given below:

- Develop training curricula on ToT techniques for trainers integrating gender perspectives and GAP training for the Department of Agricultural Extension (DAE), microfinance institutions (MFIs), NGOs and participating service providers
- Develop an operational handbook for conducting group- and community-based training including gender perspectives in high value crops, social and poverty issues (one handbook for each workers at the community level)
- Organize meetings on gender and social aspects at the group level based on a planned curriculum for 12,000 groups
- Arranged ToT training for DAE's officers, 351 NGO's officers, staff training of DAE's SAAO 6,000, NGO's workers training for 2,772, introductory training for 970 trainers and training for 48 community facilitator.
- Arranged motivational tour for 20,000 farmers and extensions tour for 2,400 SAAO's.
- Construction and extension of dormitory and training centre and procure refrigerators, mega phone, power tillers, power sprayers, foot pump, lab equipment, jeep, motor cycle etc.

SCDP is a comprehensive package for providing financial service in different agri-value chain. It offers credit to the farmers and training facility to make the farmer capable in using improved agricultural technologies from production to and marketing. 175,000 farmers have received credit support from this project and 436,246 farmers were trained on high value crops.

2.2 Case 2 – Value Chain Finance: Akti Bari Akti Khamar (One House One Farm)

Akti Bari AktiKhamar (One house one farm) is one of the best practices for value chain finance in agriculture of Bangladesh. This project is under implementation of Bangladesh government with the help of Bangladesh Rural Development Board (Box 4) as the main support agency. By this project government is promoting access to finance for farmers along modern technologies to improve their livelihood.

Box 4. Bangladesh Rural Development Board (BRDB)

Bangladesh Rural Development Board is the prime government agency engaged in rural development and poverty alleviation. BRDB basically operates by organizing the small and marginal farmers into cooperative societies for increasing agricultural production through improved means and by forming formal or informal groups of landless men and distressed women to promote income generating activities in the rural areas. The mission of BRDB is poverty free and self-reliant rural Bangladesh and the vision is to organize cooperative for optimum utilization of human as well as material resources available to development, to organize rural masses into cohesive and disciplined group for planned sustained development, accumulate/mobilize rural capital through thrift deposit and sale of shares, Ensuring proper utilization of institutional credit, developing human resources through training and motivation to the portfolio of demand driven as well as women empowerment, integrate supply and services for effective utilization and develop local leadership as community catalyst.

Agriculture is a major source of livelihood in Bangladesh, especially for the majority of poor people who living in rural areas. A key challenge for the majority of these farmers is access to finance. Lack of access to finance is a key impediment to farmers in improving the efficiency of their productions and adopting better technologies in agriculture. They are suffering from a number of constraints like shortage of fund, probably the most important problem they need to address. In this project mutual or participatory fund mobilization through micro savings and government grants has been introduced to encourage them in savings and establish ownership to the fund as well. Akti Bari Akti Khamar is an initiative to ensure agro livelihood and family farming through e-financial inclusion and empowerment of the smallholders and under privileged. The project was started in FY 2010-2011 with BDT 11,970 million for 9,640 villages that scaled up to 17,300 villages with BDT 14,920 million and finally the project has been revised on July, 2013 with BDT 31,630 million for 40,527 villages.

Bangladesh is a developing country and most of the people of Bangladesh lives below poverty line. To achieve sustainable and equitable development government of Bangladesh wants to build such type of nation where deprivation, discrimination, and human rights violation will not be happened. For this type of nation it is very necessary to earn economic potential of the society. Government has introduced different safety-net programmes along with specific projects for development through utilizing human and economic potential of the society. One House One Farm project is one of the important rural development programmes for poverty reduction through ensuring capital formation and skill development of the poor followed by livelihood (agro farming) which are exclusively their need based economic activities. This project has developed with a vision to poverty alleviation and sustainable development through fund mobilization and farming. The missions of this project are:



- Assistance to capital formation of the poor farm families
- Sharpening their skill by training and motivation
- Allow them to sit together at courtyard meeting
- Enable them to take decision independently
- Enabling them to develop need based small family farms
- Ensure marketing facilities for their product

At present this practice is going on in 53 districts (out of 64) of Bangladesh and rest of the district will be covered as soon as possible. The small and marginal farm families whose land is not more than 100 decimal in Char area, 50 decimal in general area and lives in project implemented area, they uses the facilities of Akti Bari Akti Khamar project.

This project is improving the access and delivery of rural finance services in a unique way. At first in every Upazilla there need to form a committee for beneficiary selection. This committee selects 60 beneficiaries from each village forming Village Development Organization (VDO) i.e. village cooperatives, where at least 50 percent participants are women. Selection of poor and marginal farm families is being done by a committee in an open meeting at village level in presence of all the sectoral people of the community involving the local administration, local government representatives, and community representatives. Then the fund mobilization is done in two major steps: self micro savings followed by government incentives and grants as revolving fund to the organization. The mobilized fund is their permanent capital and used in farming sustainably generation after generation. So, literally this is micro savings with ownership instead of traditional microcredit. After VDO formation members have to sit in the weekly and monthly village development meeting and identify their needs for livelihood and farming activities. After identification of their needs, each of them applies for fund from the common fund of the Village Development Organization i.e. the cooperative. After long discussion with different aspect of fund use and repayment to their fund the management committee in presence of all the members approves their proposal of assisting them in family farming. Using their mobilized fund they developed huge fund of BDT 13,320 million and invested BDT 9,000 million in 680,000 income generating family farming. They invest this fund for Poultry, Animal Husbandry, Homestead gardening and Fisheries culture. Livelihood and family farming with trade wise distribution and investment is given below:

Trade wise distribution and investment

Sl. No.	Farming types	Investment (Million BDT)	Number of family farming	Percentage
1	Fisheries	1,290	92,100	14
2	Poultry	1,830	182,800	27
3	Livestock	3,350	186,600	28
4	Nursery	440	43,600	06
5	Kitchen	580	48,400	07
6	Others	1,510	126,500	18
Total		9,000	680,000	100

Source: Annual report, 2013

Akti Bari Akti Khamar is a top prioritized family farming and poverty reduction programme implemented by Government of Bangladesh. On the basis of its significant success government chalked out a plan for expansion it to all over the country. The benefits of this project are:

- Huge secured capital formed through participatory and online fund mobilization for the small farm families.
- Hassle free e-banking or online financial management where near about one million women are benefited.
- Agricultural production under family farming increased significantly.
- Income increased BDT 10,921 per household/year.
- Comparatively solvent household increased up to 31 percent from 23 percent in project area.
- The number of poor households has been reduced rapidly to 3 percent from 15 percent within two years under the project area
- Developed 17,300 Village Development Organizations (VDO).
- Secured capital of BDT 13,320 million developed through e-financial inclusion of the underprivileged 1.38 million households
- More than 5 million poor people including 3.5 million women are empowered through courtyard meeting for self decision making.
- A lot of farmer trained up related fields of agriculture and farming.

Akti Bari Akti Khamar project is giving training support to rural people with a selecting process. Five people from the 60 members of the Village development organization are given long training on five farming livelihood activities: agriculture, nursery, fishery, poultry and livestock activities to make them specialized volunteers with a view to establish five exhibition farms in each village. The skilled volunteers are provided training and assistance to other members to organize new family farms accordingly. At the end of July 2013 project provided skill development training to 114,000 people on different trades of agro farming.

In Bangladesh the absence of competitive savings instruments and other financial services in rural areas leads to less productive forms of savings that cut further into household's scarce liquidity and dampen local growth prospects. Akti Bari Akti Khamar is such type of project where fund savings is very important. Micro savings instead of microcredit, the theme of the project is a new and exceptional initiative. Need based investment to the family farming ensure food production; their livelihood and income lead to poverty alleviation. If the livelihood sustains the income would persist leading to sustainable poverty alleviation. This model will be a universal and ideal practice of poverty alleviation for the poor across the world in particular developing countries.

2.3 Case 3 – Value Chain Finance: Kuwait Goodwill Fund

Kuwait Goodwill Fund (KGF) is another example of value chain financing in agricultural sector. This programme funded by Kuwait Fund for Arab Economic Development (KFAED) and implemented by Palli Karma Sahayak Foundation (PKSF) (Box 5) with the help of its selected 14 partner organization (PO).

Box 5. Palli Karma Sahayak Foundation (PKSF)

Palli Karma-Sahayak Foundation (PKSF), an apex development organization, was established by the Government of Bangladesh (GoB) for sustainable poverty reduction through employment generation. The major objectives of PKSF are to provide financial assistance and institutional development support to appropriate organizations for implementing sustainable inclusive financial programmes for reduction of poverty through creating productive employment opportunities for the moderate and ultra poor, small and marginal farmers and micro-entrepreneurs. Support, promote, develop and identify sustainable employment opportunities for the moderate and ultra poor, small and marginal farmers and micro-entrepreneurs; and to provide them assistance including education, health, training and risk reduction services as may be necessary for enhancing their capacity. Build and strengthen the institutional capacity of the POs (partner organizations) and enhance their ability to provide various financial and non-financial services to the poor on a sustainable manner. Support, promote and sponsor innovative programmes and suitable projects for improving the quality of life of the poor and enabling them to lead a dignified life. Help the poor to diversify and strengthen their livelihood strategies, enhance their security, give them access to assets and rights, and augment their self-respect by providing them greater choices and independence.

Agriculture is the key factor for the economic growth of the country. This sector has contributed to the growth of comprehensive GDP both in direct and indirect ways. 47.33 percent of the country's labor force is engaged in this sector. The sector claims 12 percent of the country's export income. The government is persistent in its all-out efforts to develop this sector, which is reflected in the National Agricultural Policy and 6th Five-Year Plan that have been



drawn in tune with the MDGs. The government has given optimum importance to the development of the agricultural sector with particular emphasis on the increase of food production to meet internal demand for the larger population of the country. But most of the people who engaged in agricultural sector are poor. They need money in all types of agricultural activities such as crop production, poultry, livestock and fisheries. They also need a big amount capital for purchasing different types of agricultural machine. Some farmers required different farming training for their skill development. To fulfill these types of farmers demand KGF programme provides demand-driven and appropriately timed microcredit and small loan to the people involved in farming and farming related small business and micro enterprises. A maximum amount of BDT 300,000 in the form of microcredit and BDT 300,001 to 1,500,000 as small loan can be approved under this programme. This programme also gives modern, effective and sustainable technologies, to adopt and practice these technologies to enhance production to ensure food security. KGF helps to continue lending initiatives related to production, processing, storage of food and also creates employment opportunities at the grass root level of the rural area. This all activities are directly or indirectly related to value chain finance in agriculture. The overall goal of the

programme is to raise household income, reduce vulnerability, improve food security and provide technical assistance to the farmer. Another important thing is that, under this programme cattle insurance facilities are offered to the beneficiaries to protect their cattle from various diseases and mortality in order to minimize their financial loss under such situations.

In view of Bangladesh Government's expression of special interest, Kuwait Fund for Arab Economic Development (KFAED), under its programme known as KGF for Promotion of Food Security in Islamic Countries provided a grant of BDT 800 million (US\$ 10 million) for the purpose of funding microcredit and small loan for farming and small business activities in the areas of food production and provision of related supporting services, including, without being limited to, food processing, storage and marketing. A tri-partite grant agreement was signed among the Government of Bangladesh, KFAED and Palli Karma Sahayak Foundation (PKSF) on January 30, 2011.

All regular and prospective members of mainstream microcredit programme of PKSF (Jagoron, Agrosor and Sufolon) organized by the 18 POs, who have good track record of receiving and utilizing comparatively higher amount of credit, are eligible to be the beneficiaries of this programme. At the initial phase, the programme is being implemented at eight districts (Dhaka, Mymensingh, Faridpur, Chittagong, Comilla, Jessore, Nawabganj and Joypurhat). Gradually, the coverage is extending to other districts of Bangladesh.

At KGF programme 18 PKSF-POs implementing the access and delivery of rural finance services to the farmers. They are doing all type of microfinance and loan activities in KGF programme. Savings of the beneficiaries under this programme stood BDT 139.1 million in the field. The scenario of loan distribution at PKSF-PO Level and PO-Beneficiary Level are given below:

At PKSF-PO Level (upto June 2015)

- Budget of FY 2014-2015: BDT 97.00 Crore
- Total disbursement (cumulative): BDT 297.00 Crore
- Loan outstanding: BDT 88.10 Crore
- Recovery rate (CRR): 100.49

At PO-Beneficiary Level (upto April 2015)

- Loan outstanding: BDT 107.77 Crore
- Total disbursement (cumulative): BDT 358.82 Crore
- Recovery rate (CRR): 99.22

Use of loan

Crop shares the highest portion (50.49 percent) of total loan (cum) followed by beef fattening (36.12 percent), fish culture and rearing livestock (09.02 percent) and seasonal business and others (4.37 percent) respectively.

The benefits of KGF programme are given below:

- Under KGF programme credit assistance is available in favor of food production, processing, storing and marketing of agricultural products and bi-products and in small business and micro enterprises related to similar initiatives.
- The members are enjoying flexible loan repayment facilities in the implementation of various income-generating activities with a seasonal cash flow. Such facilities include the repayments after an extended grace period with weekly/fortnightly/monthly/quarterly or one-time and balloon or modified balloon terms.

- Since the members are entitled to use higher ceiling of credit, they are enabled to increase cropping intensity by diversification of crops through extension of agricultural activities; effective use of seed, fertilizer and pesticide; mechanization of farms and to extend the coverage under irrigation. Besides, they are investing their funds in the storage and marketing of crops and expansion of markets.
- KGF programme arranging training for the beneficiaries, PO and PKSf staff; implementing of different technology dissemination methods like of demonstration, field days, farmers' rally, mass gathering, exposure visits etc.; distributing of inputs related to expansion of technologies at farm level and supervision and monitoring of the programme.
- Farmers are learning how to produce insecticide free vegetables, How to save water and urea fertilizer for rice production and how to use less labor for different crop production.
- Women are encouraged to use modern technology about crop production, livestock rearing and fisheries culture.

Under KGF programme a part of the income from the service charges earned by the POs at PO-Beneficiary level are spending for the capacity building of the credit recipients and other technical assistance. Since the inception of the KGF Programme, a total of 132,805 beneficiaries (cumulative) have been organized in 5,936 groups. It is noted that 92,691 are female comprising about 70 percent of the total enrolled



members. Considering the local level problem and prospects of new technologies a total of 746 batches (for 18,650 members) local level training were arranged on crop production, livestock rearing and fish production by the help of central and local level resource persons from Department of Agricultural Extension, Department of Livestock and Department of Fisheries. Specialized training (4-5 days long, residential) on modern livestock rearing, fish production and vegetative propagation and fruit tree management were also arranged for 350 progressive members in different research and educational organizations. Training for 501 PO level officers on "Implementation strategy of KGF Programme" and 150 officers on "Basic Agriculture and Technology Update" were organized in different PO training centres and Horticulture Centre of DAE, respectively. KGF Programme also arranged training for 160 Agriculturist/Diploma Agriculturist on "Modern Rice Production Technology" at Bangladesh Rice Research Institute (BRRI). As a part of technology dissemination 37 field days were arranged on successful demonstration at members' field. Besides, exposure visits to technologically sound farm and mobile cinema shows at field level are arranged under the programme. One of the most important activities of KGF Programme is to distribute technology expansion related inputs i.e. pheromone trap, porous pipe, power sprayer (for judicious use of pesticide to produce quality mango) and USG applicator (for easy and effective application of USG to rice field).

KGF programme is providing the credit and modern training to the rural people for different agricultural component such as livestock, fisheries and crop production. It is one of the best initiatives for value chain finance in agriculture.

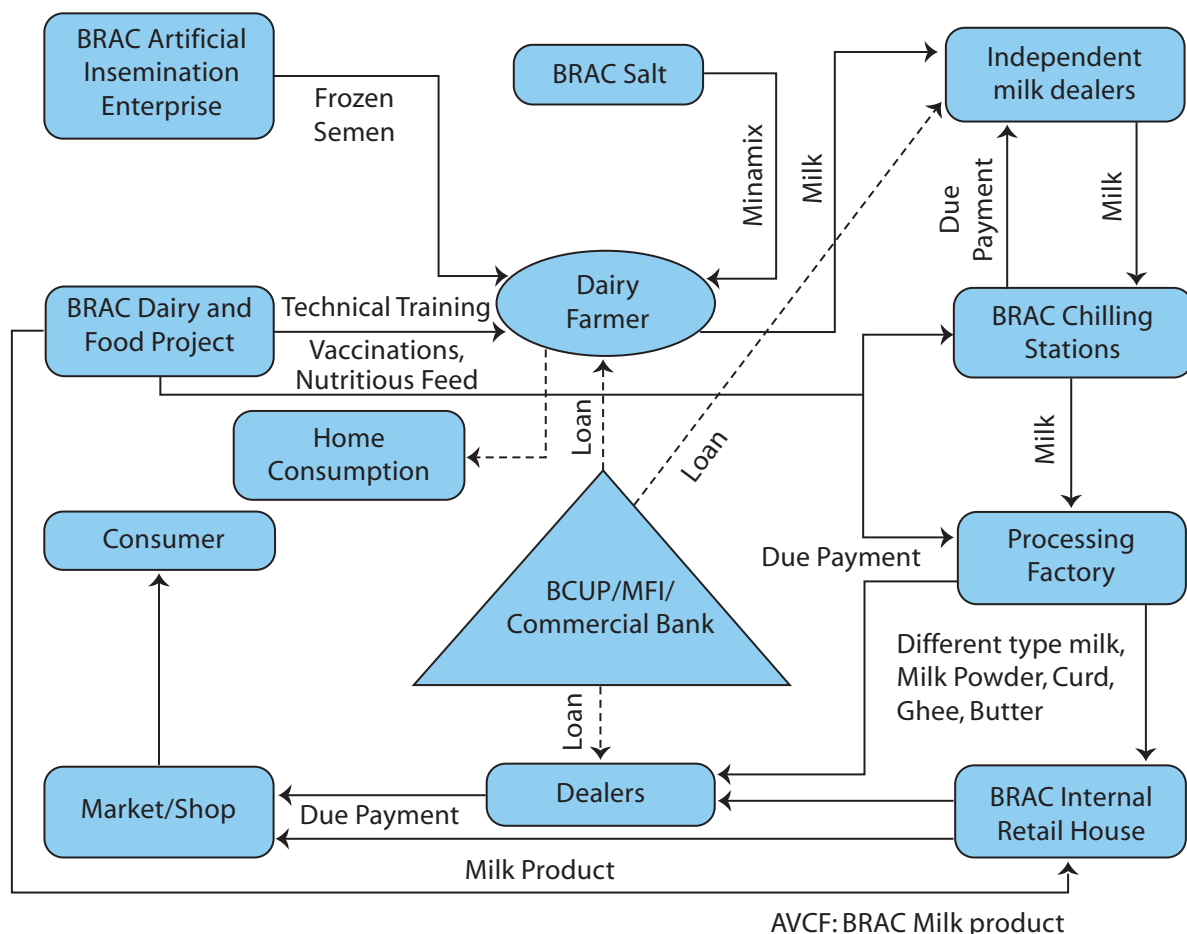
CHAPTER 3

Innovations and Strategies on AVCF

The few innovations and strategies of AVCF in Bangladesh has been described in the following section mostly made by BRAC, the largest non-government organization (NGO) of the world.

3.1 BRAC milk product

A large number of BRAC microfinance clients were investing in cattle, and in doing so were being exposed to risk owing to poor breeding, limited veterinary services, shortages in cow feed and lack of market access. The perishable nature of dairy products meant it remained difficult for rural dairy farmers to reach the large urban markets and the demand for milk in a single village was not enough to generate a sustainable profit. Dairy farmers also did not have access to proper refrigeration technologies to store the unsold milk. Sir Fazle Hasan Abed, founder of BRAC, noticed this problem and proposed establishing a milk processing plant to collect milk from local farmers for a fair price. As a result, BRAC initiated BRAC dairy and food project (BDFP) in 1998 to serve as a market conduit for dairy farmers throughout rural Bangladesh.



BDFP's original mission was to secure market access for dairy farmers, ultimately helping them generate income. Over time, BDFP's goal has expanded to include serving high quality milk product to their customers. With inconsistent electricity and therefore refrigeration, dairy products generally are not widely available in Bangladesh. Eighty percent (80%) of Bangladesh still relies on the 'informal' milk market which delivers bulk amounts of raw milk to consumers. BDFP caters to the 20 percent of Bangladeshi who rely on the formal milk market which sells processed and packaged milk. In essence, BDFP channels milk from rural areas into urban areas while channeling the revenue into rural areas.

BRAC dairy is offer cattle development and technical training, vaccination, feed cultivation facilities and other services to the rural cattle farmers. BRAC has another project named "artificial insemination" that supply frozen semen for improve breed and "BRAC salt" supply minamix kit that increase milk production of cow. Independent milk dealer collect milk from rural farmers. BRAC collect milk from these milk dealer and stored and process milk in BRAC chilling centres and processing factory. Then BRAC sell processed milk, milk powder, butter, Ghee etc. to the dealer or super market. Dealer sells these products to the different shop. Consumers buy milk from super market or shop. Independent milk dealers, dairy farmers, product dealers can take loan from BRAC Borga Chachi Unnayan Project (BCUP), different microfinance institutions, commercial bank etc. BRAC dairy was the first dairy company in Bangladesh to have received ISO 22000 Certification, setting an example of vigilance at every stage of dairy production, processing, and distribution contributing to dairy products' safety record. Through its 101 chilling centres, BRAC dairy collects milk from more than 50,000 registered farmers and sells them nationwide through is under the Aarong dairy brand.

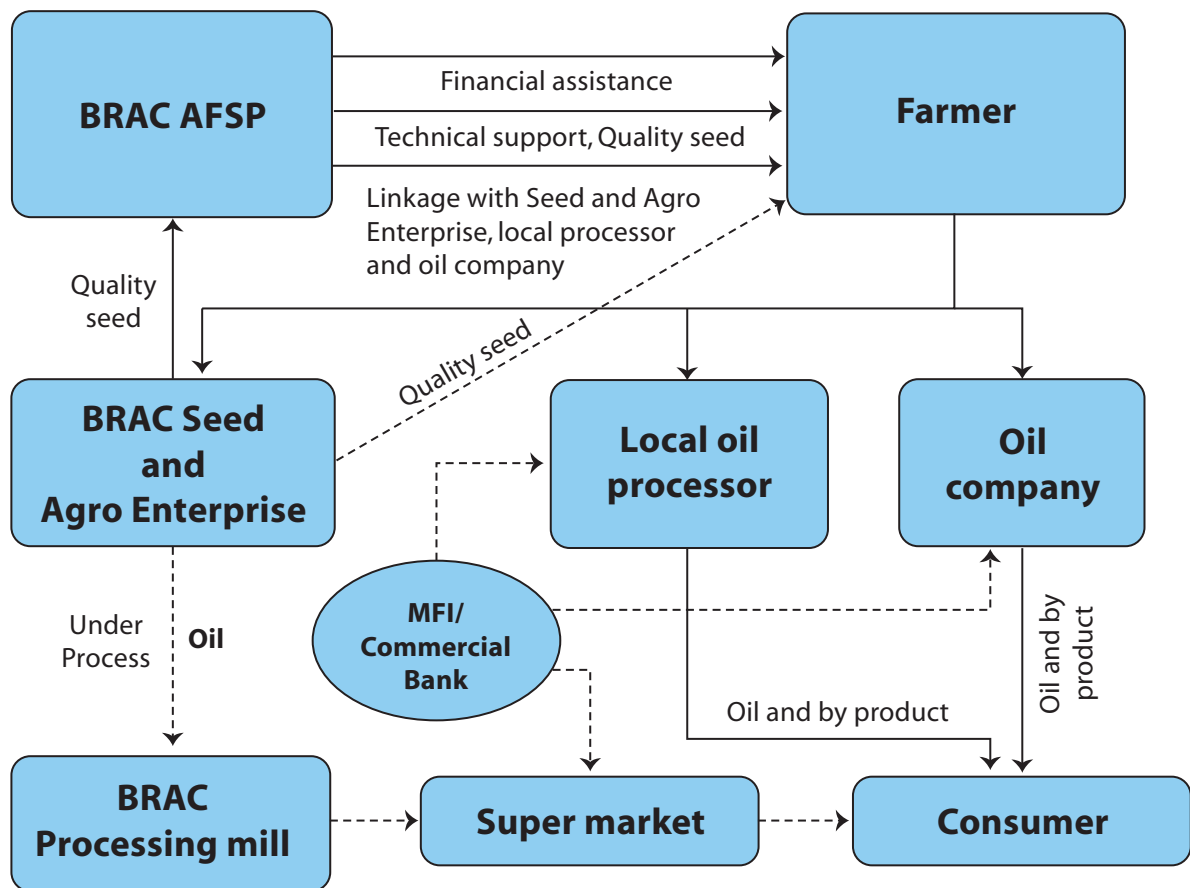
When BDFP first started, it produced 140,000 litres of milk per day. As of now, it has the processing capacity of 250,000 litres of milk per day engaging approximately 1,500 employee, making it one of the largest BRAC enterprises.

3.2 Sunflower for edible oil

In Bangladesh shortage of edible oil has been prevailing since independence. Only 20 percent of the country's annual demand can meet by the domestic production and rest 80 percent is imported from other countries which is very expensive. But Bangladesh land is suitable to cultivate different types of oil crop such as sesame, groundnut, mustard, sunflower etc.

A large portion of land in the southern zone of Bangladesh remains fallow at Rabi season. Irrigation is very difficult in that area and farmers are dependent on rainfed agriculture. For sunflower cultivation water is required very minimum. Compare to rice cultivation water required for sunflower is one-eighth.

BRAC Agriculture and Food Security Programme (AFSP) is the pioneer of sunflower cultivation in Bangladesh. BRAC organize some farmer group and give them technical support for modern sunflower cultivation. BRAC Seed and Agro Enterprise supply quality seed to farmers. AFSP create a linkage with Seed and Agro Enterprise and farmers to purchase seed with credit. After cultivation of sunflower seed another problem is occurred and that is marketing facility was not good for sunflower seed. In that situation Seed and Agro Enterprise wants to purchase seed from farmers with fair price. AFSP also create a linkage with local oil processor and oil company with farmers. Local oil processor, oil company and farmers can take loan from MFI and different bank. After process local oil company and processor sell their oil to consumer. With this system now in southern part of Bangladesh sunflower production to consumer chain is created and it's running.



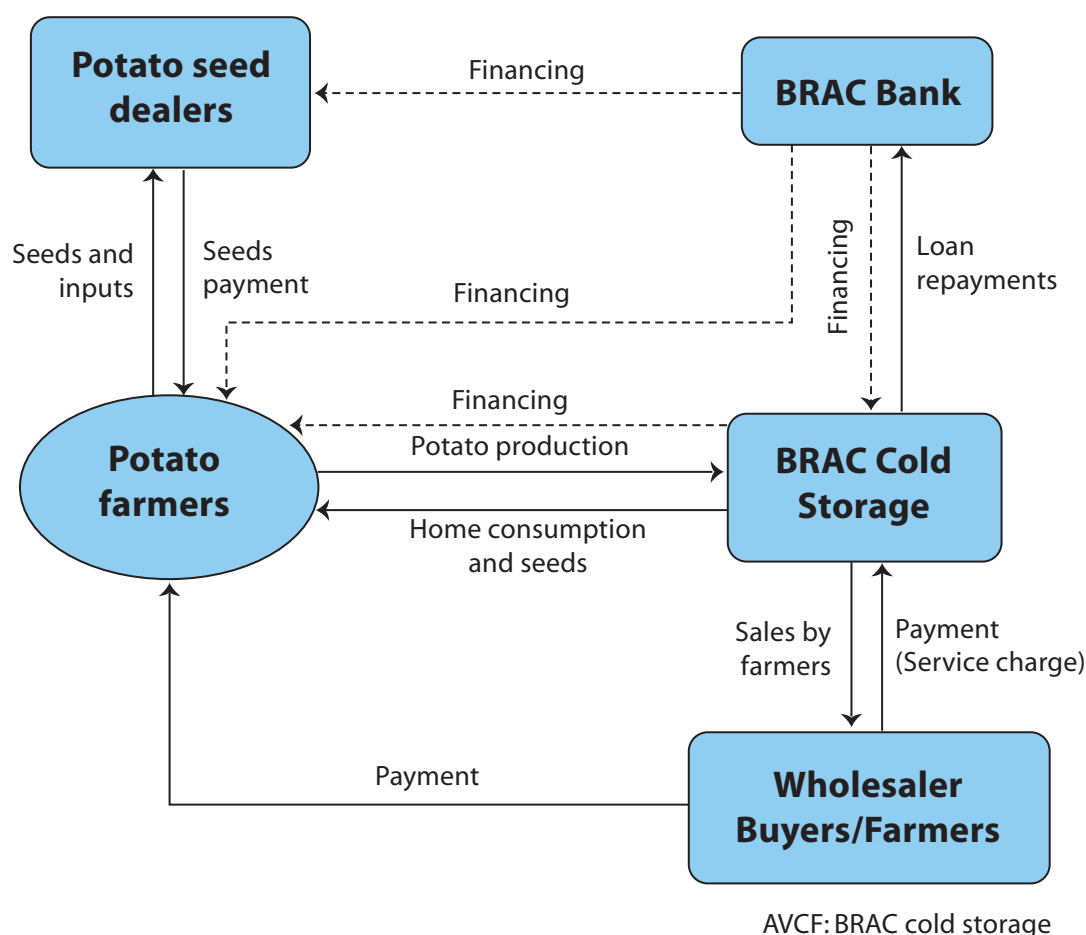
AVCF: Sunflower

BRAC seed and agro enterprise has set up a sunflower oil processing mill very recent. This mill is not completed yet and it is under process. After fully set up of mill BRAC will sell sunflower oil to super market and consumer can buy sunflower process oil from different shop. AFSP has successfully introduced sunflower as a oil crop to more than 25,000 farmers covering 6,500 hectares of land in the coastal region of Bangladesh where the average yield of sunflower was 2.00-2.50 t/ha.

3.3 BRAC cold storage

BRAC set up cold storage operations in south-eastern part of Bangladesh because of its easy accessibility by land and water, and started out by giving the farmers loans to use BRAC's cold storage facilities. The loans cover a maximum of 60 percent of the farmers' storage costs. As BRAC Cold Storage allowed these farmers to keep their products fresh for longer, enabling them to sell more of their potato crop over a longer time, many became financially independent and no longer needed loans in order to store their crop, so the project started operating like a profitable enterprise rather than a microfinance programme. Originally, the enterprise had intended to provide reliable cold storage to fruit and vegetable farmers, as well as traders with leftover produce. However, since fruits and vegetables require very particular, costly preservation processes, BRAC Cold Storage soon limited its storage facility to potato farmers only.

BRAC storage and financing are linked but a farmer can use the facilities with or without financing. Financing for the farmers who store their potatoes is provided by the BRAC bank. Those storing their potatoes are small and medium farmers and some traders. Potato storage model is a proven model for addressing the strategic needs of its clients in the potato value chain. Through its banking facilities, it can provide financing to the farmers, traders, the cold storage enterprise, etc. as needed and by being engaged at different levels of the value chain, it has a strong understanding of the sector, the markets and most importantly the clients.



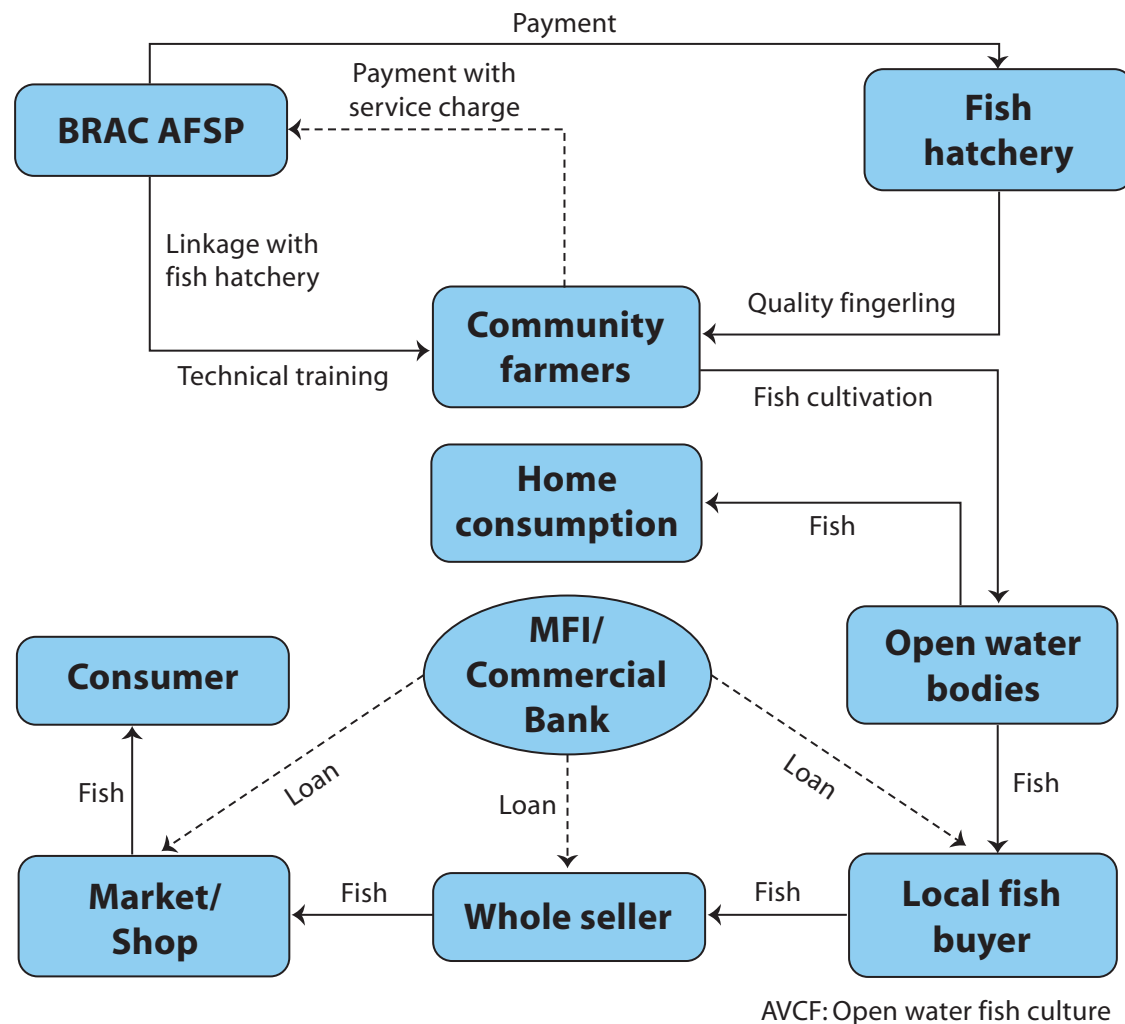
Source: APRACA, 2015

BRAC Cold Storage has for the capacity to store 60,000 bags of potatoes, each bag holding approximately 80 kg. BRAC Cold Storage is different from other cold storage facilities because of the quality of service it provides. Unlike many competitors, BRAC Cold Storage does not skirt the high diesel costs to properly run the generators for the sufficient cooling of potatoes.

3.4 Open water fish culture

After independence of Bangladesh, aquaculture production has been developed considerably. The increase of production is actually pond based where a large proportion of open/semi-closed water bodies remain almost fallow throughout the year. By proper management of these fallow water bodies overall fish production of the country can be maximized to several folds. So, it is very important to find-out the appropriate options for effective using of numerous fallow/underused seasonal floodplain lands.

Agriculture and Food Security Programme of BRAC has initiated by bringing this fallow land under fish culture activities. Community approach is introduced in this case where the adjacent people of water-body have been encouraged to form a community who are engaged in all types of activities of fish production. BRAC AFSP also offers technical training and instant capital for these community farmers and the condition is after harvesting of fish they will be back the money with extra 10 percent service charge. Open water bodies can be called those types of areas where 4-6 month water logged condition is occurred.



From 2012, this programme has started in different areas of Bangladesh. AFSP create a linkage with farmers groups and hatchery for availability of quality fingerling. The hatcheries are supply fingerling to open water and take their payment from BRAC. After harvesting of fish farmers sell fish to local fish buyer and payment back with service charge to BRAC. Local fish buyer sell fish to market or shop and finally consumers are purchase fish from market/shop. Small shopper, local buyer and whole seller can take loan from MFI or bank for this types of business.

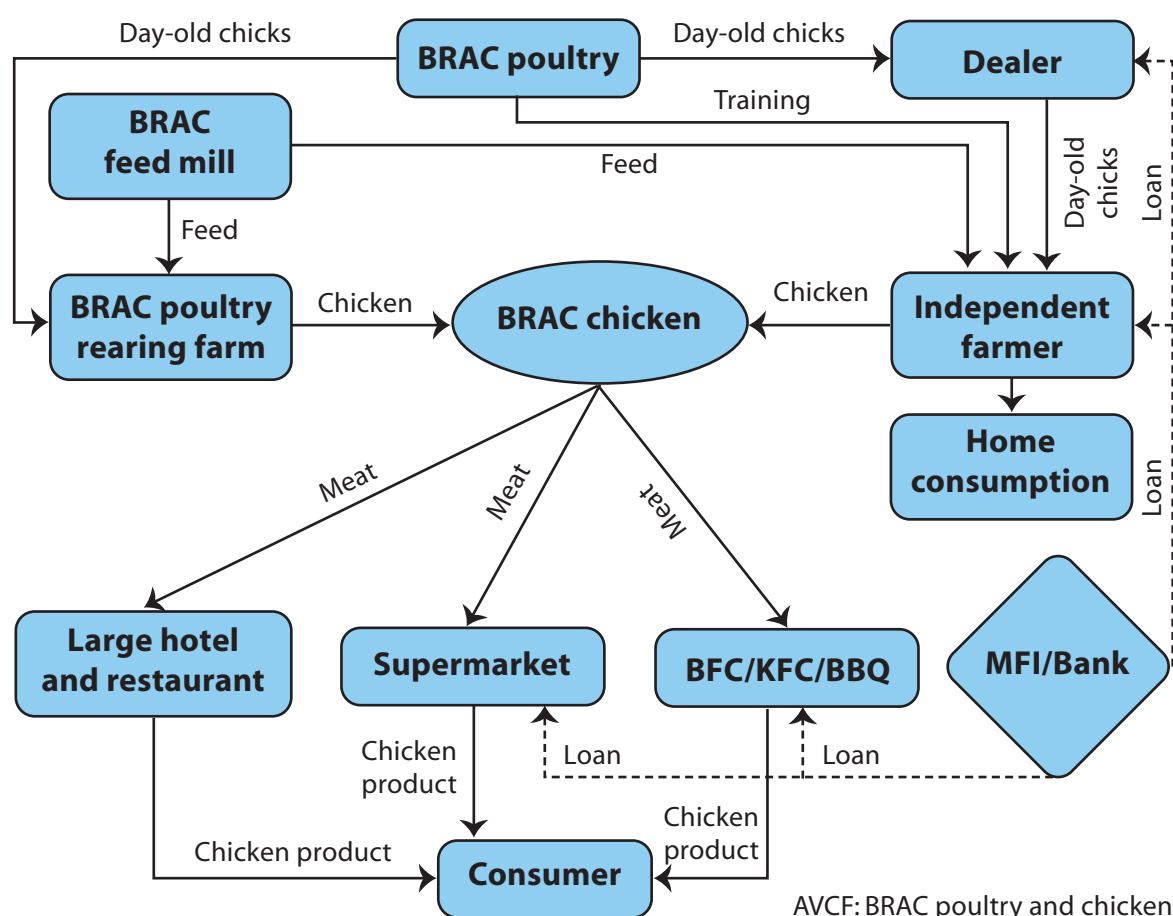
In some parts of Bangladesh this approach is seen to be very much successful where a waste land is changing to a resourceful water-body. Overall objectives of fishery in floodplain are to recruit the unused/under-used water bodies under fish culture, to enhance fish production, to meet protein demand, to create an alternative source of income, to encourage a sustainable production and to improve socio-economic condition.

3.5 BRAC poultry and chicken

When BRAC's Chicken enterprise became a key local supplier of KFC – one of the world's most popular chicken fast food chains which has more than 11,000 restaurants in over 80 countries; it represented a significant accomplishment for what had started as a grassroots experiment in the 1970s to create income generating opportunities for the poor and improve the poultry sector in Bangladesh.

BRAC Chicken was established to meet the growing demand for ready-to-cook chicken in urban areas. Initially a pioneer of the packaged poultry meat market, BRAC Chicken is now one of major players in the processed meat market. BRAC Chicken also strives to create a market for poultry that provides

farmers with a fair price. It started out as a broiler processing enterprise in 2004, with the capacity to process approximately 10,000 chickens per day and was the only automated plant of its kind in Bangladesh. BRAC Chicken has also released a variety of processed chicken products, including chicken nuggets and chicken wings.



Given that the demand for poultry meat in Bangladesh still exceeds the supply, BRAC's poultry operations continue to be an important means of supporting rural farmers in their production, while also driving sector growth by increasing the supply of high-yield variety chicks and processed broiler meat.

A highly integrated enterprise that cross-collaborates with a number of other BRAC enterprises, BRAC Chicken acquires 30-40 percent of its supply from BRAC's poultry rearing farms while the remaining supply comes from other independent farms, both rural and commercial. BRAC Chicken sells the pre-prepared meat to a variety of customers including large restaurants, hotels and supermarkets. Some of its major vendors include KFC, Westin Hotels, Radisson Hotels, Best Fried Chicken (BFC) and BBQ Bangladesh.

BRAC Poultry Rearing Farms purchase day-old chicks from BRAC Poultry. Instead of then directly selling these day-old chicks to individual farmers, BRAC Poultry sells them to dealers who in turn resell the chicks to farmers who rear the chickens, creating a more cost-effective supply model. BRAC's poultry farms use feed from BRAC Feed Mills. The collaboration among the enterprises, namely BRAC Chicken, BRAC Poultry Rearing Farms, BRAC Poultry and BRAC Feed Mills, creates a value-addition chain which allows BRAC Chicken to sell a high quality processed chicken product at a fair price. Chicken dealer, supermarket owner, restaurant owner and independent farmer can take loan for chicken purpose from different bank of microfinance institutions. Sometimes dealers and independent farmers purchase day old chicks with due payment.

BRAC Chicken manages the quality of its chicken along each step of the supply chain: BRAC trains chicken rearers on how to vaccinate their chickens and raise them hygienically, and hires veterinarians to handle more complex health issues. The poultry is always under regular supervision of the vets, particularly during the use of vaccines, medicine, antibiotics, etc. If the chickens are injected with approved antibiotics, a time period of at least 72 hours is given to allow the chemicals to leave their system before processing them. At the end of the processing chain, BRAC Chicken sells high quality chicken, achieving HACCP ('Hazard Analysis and Critical Control Point'; a systematic approach to ensuring food safety) certification. In the process, BRAC Chicken also tries to minimize any production activities that may harm the environment.

With consumers increasingly demanding healthy and convenient food options, BRAC Chicken plans to expand its chicken processing operation and introduce more variety in its product line. As the increased demand for poultry meat has spurred an increase in demand for day-old chicks, BRAC Poultry has scaled up its production to ensure sufficient supply to BRAC Chicken. BRAC's poultry rearing farms also plan to increase their capacity to serve this growing demand.

CHAPTER 4

Implications of Rural Finance to Agriculture and Rural Development

Agricultural and rural credits are important in the context of strengthening the efforts for ensuring food security as well as the overall socio-economic development in the country. Resources must be infused into the rural economy to strengthen the base of the national economy. During the fiscal 2009-2010, agricultural credit of Tk 12,000 crore is being distributed, which is substantially larger than in the preceding year. At the initiative of Bangladesh Bank, the banking system, mainly Krishi Bank, Rajshahi Krishi Unnayan Bank, and BRAC refinanced by the Bangladesh Bank distributed the amount. The momentum will be sustained in future, with increased supplies of credit and wider coverage of farmers. Private commercial banks have also started providing agricultural credit, as encouraged by the government. In addition, the Small Farmers' Development Foundation has been established as an autonomous institution by the government to provide microfinance to small and marginal farmers in Bangladesh. However, problems remain with regard to targeting, timely delivery, proper utilization of funds, and collection. The recent steps taken by the present government of issuing identity cards to farmers and enabling them to open bank accounts with a deposit of only Tk 10 (Taka ten) can help overcome these deficiencies. In FY 2014-2015, an amount of Tk 15,978.46 crore was disbursed as agriculture and rural credit against the target of Tk 15,550.00 crore implying an achievement of 102.75 percent of the total target. The Agricultural and Rural Credit Policy and programme was undertaken in FY 2014-2015 by retaining the old features and including some new features such as widening the scope of agricultural and rural credits expanding banking services in rural areas by adopting technical strategies, encouraging farmers to banks by providing easy banking services, providing loans in producing of import substitute crops, seeds producing sector and in providing earth-worm compost fertilizer and assists to use newly innovated variety of crops and technologies. This policy supports help directly in agricultural sector to alleviate rural poverty and improving living standard in rural area through increasing fund mobilization in that area and extending income generating activities.

Bibliography

- African Development Bank, 2013. Agricultural Value Chain Financing (AVCF) and Development for Enhanced Export Competitiveness. P. 4.
- Alauddin, M. and Biswas, J. 2014. Agricultural Credit in Bangladesh: Present Trend, Problems and Recommendations. *Journal of Economics and Sustainable Development*. 5(27). PP. 18-20.
- APRACA (Asia-Pacific Rural and Agricultural Credit Association), 2015. Training of Trainers on Agricultural Value Chain Finance. 7-11 December, Bangkok, Thailand.
- Bangladesh Bank, 2015. Monthly Report on Agricultural and Rural Financing. Research Department Bangladesh Bank.
- BRKB (Bangladesh Rice Knowledge Bank). 2015. Rice in Bangladesh. Implemented by: Bangladesh Rice Research Institute (BRRI) and supported by NATP-SPGR-BARC Project Bangladesh. <http://www.knowledgebank-brri.org/riceinban.php>
- Calvin Miller and Linda Jones, 2010. Agricultural Value Chain Finance Tools and Lessons, p. 11.
- Dalila Cervantes-Godoy and Joe Dewbre, (2010). Economic Importance of Agriculture for Poverty Reduction. OECD Food, Agriculture and Fisheries Working Papers, No. 23, OECD Publishing. P. 5.
- Das, P.K. and Aquino M.U. 2013. Value Chain Financing in Agriculture: Case Studies from India. APRACA FinServAccess Publication, Bangkok, Thailand.
- Food and Agriculture Organization. 2013. <http://www.fao.org>.
- Food and Agricultural Organization, 2015. <http://www.fao.org/ag/ags/agricultural-finance-and-investment/value-chain-finance/en/>
- Thapa, G. and Gaiha, R. 2011. Smallholder Farming in Asia and the Pacific: Challenges and the Opportunities. Paper presented at the Conference on New Directions for Smallholder Agriculture, 24-25 January 2011, IFAD HQ, Rome.
- Tahera, Khadiza Tul 2015. The Impact of Microfinance in Rural Banking Activities in Bangladesh. *Bangladesh Research Journal*. 15(1). P. 160.
- Md. Ariful Islam, Md. Rayhan Islam, Mahmudul Hasan Siddiqui and Luthful Karim, 2014. Importance of Agricultural Credit for Rural Development of Bangladesh: A descriptive Approach. *International Journal of Business and Economics Research*. 2(1). PP. 68-83.
- Wikipedia, 2015. https://en.wikipedia.org/wiki/Agriculture_in_Bangladesh
- World Economic Forum, 2015. New Vision for Agriculture. <http://www.weforum.org/projects/new-vision-agriculture>

Appendices

Table 1. Agricultural Credit Performance of Banking Sector (In billion Taka)

Year	Disbursement Target	Actual Disbursement	Recovery	Overdue	Outstanding	Overdue as % of outstanding
FY 2002	33.27	29.54	32.60	67.55	114.98	58.75
FY 2003	35.61	32.78	35.16	65.26	119.13	54.78
FY 2004	43.79	40.48	31.35	62.65	127.06	49.31
FY 2005	55.38	49.57	31.71	57.81	140.40	41.18
FY 2006	58.92	54.96	41.64	66.53	153.77	43.27
FY 2007	63.51	52.93	46.76	66.35	145.82	45.50
FY 2008	83.09	85.81	60.04	58.87	178.23	33.03
FY 2009	93.79	92.85	83.77	60.80	195.98	31.02
FY 2010	115.12	111.17	101.12	64.04	225.88	28.55
FY 2011	126.17	121.84	121.48	60.97	254.92	23.92
FY 2012	138.00	131.32	123.59	60.52	259.75	23.30

Source: Alauddin and Biswas, 2014

Table 2. Agricultural Credit Performance of State Owned Commercial Banks (SOCB's) (In billion Taka)

Year	Disbursement Target	Actual Disbursement	Recovery	Overdue	Outstanding	Overdue as % of outstanding
FY 2003	10.50	6.80	7.02	24.19	34.80	69.51
FY 2004	14.50	9.30	8.00	23.60	37.50	62.90
FY 2005	17.05	11.42	8.78	18.45	40.89	45.12
FY 2006	15.41	11.92	11.51	28.06	49.69	56.47
FY 2007	15.45	10.28	12.46	29.32	49.11	59.70
FY 2008	18.00	13.66	15.09	26.33	49.57	53.12
FY 2009	20.15	15.89	14.79	26.63	53.19	50.06
FY 2010	23.45	19.82	15.31	26.46	60.99	43.38
FY 2011	25.75	22.14	20.11	25.83	64.36	40.13
FY 2012	26.90	24.33	21.72	23.99	67.56	35.51

Source: Alauddin and Biswas, 2014

Table 3. Agricultural Credit Performance of Bangladesh Krishi Bank (BKB) (In billion Taka)

Year	Disbursement Target	Actual Disbursement	Recovery	Overdue	Outstanding	Overdue as % of outstanding
FY 2003	16.00	16.69	19.20	21.71	53.28	40.75
FY 2004	17.10	19.60	13.00	19.80	55.80	35.50
FY 2005	24.00	22.80	11.00	18.79	61.25	30.68
FY 2006	27.00	26.64	16.05	18.22	61.86	29.45
FY 2007	31.50	27.45	18.83	26.10	61.44	42.48
FY 2008	36.50	32.96	13.16	21.06	73.34	28.71
FY 2009	38.00	38.24	35.72	21.24	81.03	26.21
FY 2010	42.50	45.67	44.23	23.63	96.99	24.36
FY 2011	45.00	52.34	50.18	16.47	116.22	14.17
FY 2012	46.00	47.33	50.72	22.04	111.69	19.73

Source: Alauddin and Biswas, 2014

Table 4. Agricultural Credit Performance of Rajshahi Krishi Unnayan Bank (RAKUB) (In billion Taka)

Year	Disbursement Target	Actual Disbursement	Recovery	Overdue	Outstanding	Overdue as % of outstanding
FY 2003	5.25	5.75	5.43	6.69	15.68	42.67
FY 2004	7.00	6.80	6.30	7.30	17.40	41.70
FY 2005	7.75	8.70	6.83	7.65	20.40	37.50
FY 2006	8.15	8.88	7.47	6.86	23.51	29.18
FY 2007	8.00	7.37	8.51	5.90	24.45	24.13
FY 2008	8.00	7.65	8.45	7.75	25.58	30.30
FY 2009	8.55	8.80	9.01	8.54	27.34	31.24
FY 2010	10.00	10.60	9.92	9.30	31.33	29.68
FY 2011	11.40	10.10	11.91	12.95	33.15	39.06
FY 2012	12.20	11.51	13.15	13.18	35.68	36.94

Source: Alauddin and Biswas, 2014

Table 5. Agricultural Credit Performance of Foreign Banks (FBs) (In billion Taka)

Year	Disbursement Target	Actual Disbursement	Recovery	Overdue	Outstanding	Overdue as % of outstanding
FY 2008	3.69	8.54	8.02	0.0	3.01	0.0
FY 2009	1.91	5.13	3.09	0.0	5.73	0.0
FY 2010	4.64	5.54	4.76	0.0	5.19	0.0
FY 2011	5.82	5.46	10.40	0.0	3.31	0.0
FY 2012	5.47	4.82	5.15	0.0	2.26	0.0

Source: Alauddin and Biswas, 2014

Table 6. Agricultural Credit Performance of Domestic Private Sector Commercial Banks (PCBs)
(In billion Taka)

Year	Disbursement Target	Actual Disbursement	Recovery	Overdue	Outstanding	Overdue as % of outstanding
FY 2008	9.65	15.60	8.27	0.50	16.73	2.99
FY 2009	18.57	17.80	14.27	0.31	18.55	1.67
FY 2010	25.95	22.84	19.85	0.38	21.08	1.80
FY 2011	30.49	24.28	21.89	1.25	26.62	4.70
FY 2012	47.43	43.33	32.85	1.31	42.56	3.08

Source: Alauddin and Biswas, 2014

Table 7. Agricultural Credit Performance of Bangladesh Rural Development Board (BRDB)
(In billion Taka)

Year	Disbursement Target	Actual Disbursement	Recovery	Overdue	Outstanding	Overdue as % of outstanding
FY 2003	3.52	3.53	3.49	9.82	12.45	78.89
FY 2004	5.20	5.00	4.00	9.20	13.50	68.10
FY 2005	6.46	6.63	5.06	10.19	15.08	67.57
FY 2006	7.73	7.44	6.52	10.68	15.88	67.25
FY 2007	8.42	7.80	6.90	2.58	8.34	30.94
FY 2008	7.11	7.35	6.97	2.47	9.16	26.97
FY 2009	7.51	6.94	6.82	3.36	9.39	35.78
FY 2010	8.50	6.66	6.99	3.58	9.58	37.37
FY 2011	7.70	7.50	6.91	3.91	10.65	36.71

Source: Alauddin and Biswas, 2014

Table 8. Credit Performance of NGOs (In billion Taka)

Year	Disbursement	Recovery	Overdue	Outstanding	Overdue as % of outstanding
FY 2004	72.40	63.20	1.90	46.00	3.80
FY 2005	91.00	78.60	3.10	59.40	5.30
FY 2006	129.00	116.10	3.30	80.60	4.10
FY 2007	156.60	137.30	4.40	102.10	4.30
FY 2008	198.00	171.10	6.20	102.70	5.10
FY 2009	222.00	224.70	6.90	132.60	5.20
FY 2010	253.45	213.94	7.14	153.35	4.66
FY 2011	278.64	256.95	6.91	175.69	3.93
FY 2012	293.65	232.27	6.00	207.51	2.89

Source: Alauddin and Biswas, 2014



ASIA-PACIFIC RURAL AND AGRICULTURAL CREDIT ASSOCIATION (APRACA)

Room A303, Bank for Agriculture and Agricultural Cooperatives (BAAC)
469 Nakhonsawan Road, Dusit, Bangkok 10300, Thailand

Tel: (+662) 282-0693, 282-1365

Fax: (+662) 280-1524

E-mail: apraca@apraca.org

Website: www.apraca.org