

PROGRESS REPORT

(AUGUST 2008-JUNE 2010)



KRISHI GOBESHONA FOUNDATION

A non-profit foundation to support CGP for agricultural research
National Agricultural Technology Project (NATP) : phase - 1, (GOB/IDA project cr.4386-BD)
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ABBREVIATIONS AND ACRONYMS

AIS	Agricultural Information Service
BARC	Bangladesh Agricultural Research Council
BADC	Bangladesh Agricultural Development Corporation
BARI	Bangladesh Agricultural Research Institute
BRII	Bangladesh Rice Research Institute
BODs	Board of Directors
CGP	Competitive Grant Program
DOF	Department of Fisheries (MOFL)
DLS	Department of Livestock Services (MOFL)
DAE	Department of Agriculture Extension (MOA)
DG	Director General
DBMS	Data Base Management System
DBM	Data Base Management
ED	Executive Director
GOB	Government of Bangladesh
GIS	Geographical Information System
GO	Government Organization
GnB	General Body
IDA	International Development Association (WB Group)
IFAD	International Fund for Agricultural Development
IPM	Integrated Pest Management
KGF	Krishi Gobeshona Foundation
MOU	Memorandum of Understanding
M&E	Monitoring and Evaluation
MIS	Management Information System
NATP	National Agricultural Technology Project
NARS	National Agricultural Research System
NGO	Non-government Organization
OM	Operational Manual
PCU	Project Coordination Unit
PAD	Project Appraisal Document
PIs	Principal Investigators
PAM	Policy Analysis Matrix
RM	Research Management
RPATC	Regional Public Administration Training Center
SCA	Seed Certification Agency
TBS	Trap Barrier System

Foreword

Agriculture is the cornerstone of rural economy. Over 60% of Bangladesh population depends on agriculture. Over the decades there has been a significant increase in agricultural production although the balance between the demand and the supply remains precarious. Declining natural resource base, stagnating yields and impending climate change present a big challenge to feeding the ever increasing population. In order to support boosting production, generation of new technologies and dissemination thereof, it is necessary to accelerate agricultural research. Government of Bangladesh established Krishi Gobeshona Foundation (KGF) as a source of sustainable funding for supporting agricultural research and development. World Bank funded National Agricultural Technology Project (NATP) entrusted the KGF with the responsibility of operating Competitive Grants Program (CGP), a sub-component of research component of the project. KGF started funding CGP research projects beginning May, 2009.

This report highlights activities of the Foundation and some of the successes achieved through the implementation of CGP research. The FY 2008-2009 saw major activities in building the organization through recruitment of professionals and staff, organizing offices and establishing the CGP using guidelines of BARC/World Bank under NATP. Basic activities conducted in the initial year paved the way of building partnership with the NARS institutions and agricultural universities. Active participation and collaboration of the research leaders and scientists of NARS institutions and non-government partner organizations helped implementing the CGP. The KGF Board of Directors provided necessary policy guidance in building the programs and the organization.

Generous assistance and strategic direction of the Ministry of Agriculture and the BARC helped develop and functioning of the Foundation. Able leadership of Executive Director Dr. M. Nurul Alam and hard works of his team members brought the Foundation in to focus. I Commend everyone for their contribution in bringing out the first progress report of KGF.

Chairman
KGF Board of Directors

Executive Summary

With the government initiative, Krishi Gobeshona Foundation (KGF) was established in 2007 but started functioning after the appointment of Executive Director (ED) in August 2008. KGF has been entrusted with responsibility of implementing Competitive Grants Program (CGP) of the National Agricultural Technology Project (NATP) Phase I. In the first year (2008-2009), its activities mainly concentrated on the establishment of KGF office, organizing research grant program, processing, procurement and hiring of personnel. All the approved project personnel of the Foundation were recruited at the end of the first year. KGF completed the basic works of the first round of calling research proposals and evaluation thereof, approval and awarding of projects. KGF Board approved 54 CGP projects and started funding of 30 research projects in Phase I. Implementation of CGP Phase I began in May 2009. The second year's activities concentrated mainly on the management of CGP projects.

Of the 30 projects in CGP Phase I, scientists of NARS and public sector universities are implementing 18 projects while the remaining 12 projects are being implemented by the non-government organizations having capable technical manpower and research facilities. On completion of one year's activities, the PIs presented their progress of research work in an Annual Review Workshop held during May 24-26, 2010. Three projects of one year duration, presented the Project Completion Report. Annual reports and Final reports were evaluated by relevant experts drawn from NARS institutions and universities.

Based on lessons learnt and on suggestions of the GOB/IDA Supervision Mission, KGF reviewed the remaining project proposals for effective implementation towards achieving intended results. Upon further review, the KGF Board accorded final approval of funding 24 projects in Phase II. Implementation of Phase II projects began in November 2009. CGP Phase II projects are mostly run by the scientists of NARS and public sector universities. Only two projects are with the non-government organizations.

KGF professionals monitored the project activities through reviewing the implementation progress report and visiting the project sites as well as consulting with the Principal Investigators (PIs) of the projects. Formats have been developed and standardized for using in monitoring of the project activities. Consultations were in the form of coordination meeting, formal workshop and/or bilateral discussions. Two-half yearly review workshops, two coordination meetings and several consultation meetings involving PIs of CGP projects were held during FY 2009-2010. KGF also held an appraisal meeting informing stakeholders about the activities of the Foundation.

Drafting of the Manuals on Personnel Management and Financial Management of KGF has been completed. The Research Operational Manual for CGP has been revised, taking inputs from the World Bank, BARC and PCU the draft manuals on Personnel Management and Financial Management is being expert-reviewed for finalization.

Apart from management of CGP projects, the KGF in association with the Bangladesh Agricultural Research Council (BARC), was also engaged in research priority setting. A total of 4 Regional Workshops were held at Bogra, Chittagong, Barisal and Mymensingh, and a National Workshop in Dhaka. A wide range of consultation took place in the workshops capturing the regional and national problems of agriculture that require research intervention.

The approved project personnel were in place for running the CGP component of KGF Unit of NATP Phase I during the year under report. Expenditure of KGF was Tk. 286.37 lac for FY 2008-09 and Tk. 686.95 lac for FY 2009-10, totaling Tk.973.32 lac for two financial years out of which Tk.562.80 lac (124.48+438.32) was spent for implementation of the CGP projects.

During the period of CGP project implementation, KGF professionals identified some basic weaknesses, particularly in relation to priority settings, quality of research proposals, reviewing of research projects, number of CGP research projects being handled, project duration, and clarity of research operational manual. These aspects need correction for successful project implementation in order to get desired outputs in future. Details of the experiences and observations have been presented in section VII: Key Lessons Learned.

I. Introduction

Krishi Gobeshona Foundation (KGF), an independent grant making organization having its own General Body (GnB) and Board of Directors (BODs), was established by the government of Bangladesh in August, 2007 under the Company Act of 1994. The Executive Director (ED) is the chief executive of the foundation who operates under the overall supervision of the KGF Board.

KGF is responsible for management and implementation of the Competitive Grants Program (CGP) with objectivity and transparency. CGP is a sub-component of the research component of the National Agricultural Technology Project (NATP Phase-1), financed by the World Bank and IFAD. KGF through its CGP seeks to develop a more pluralistic research system by opening the CGP to the NARS institutes, universities, other research institutes, NGOs and private sector organizations. Agricultural research and development projects funded under CGP require location-specific, pre-identified, high priority area, multi-disciplinary approach, short to medium term duration, demand driven, immediate benefit and problem-solving criteria. KGF funds the CGP projects that are crucial to bridge the yield gaps, respond to pre-identified problems and address other demand-based issues for improving productivity and farm income. Major focus is on on-farm applied and adaptive research, including marketing, socio-economic aspects and value addition.

The thematic areas for CGP research had been identified through a consultative process involving all relevant stakeholders and subsequently prioritized through a joint review workshop by BARC with the assistance of NARS institutions and other organizations including KGF. Upon release of priority research thematic areas by the BARC, KGF invited research proposals (Concept Note/Full Proposal) in October 2008 from the relevant organizations having capacity to undertake such work, including NARS institutes, Universities, NGOs and the private sector following the research manual of BARC. A total of 54 projects were approved by KGF Board after completion of review process for implementation in two phases. Funding for First phase projects (30) and second phase projects (24) started from May and November, 2009 respectively. This Annual Report presents a brief account of the activities of KGF during the period from August, 2008 to June, 2010.

II. Project Development Objectives of KGF Unit of NATP:Phase-1

In the Project Appraisal Document (PAD) it is indicated that for the research component, the project development objectives would be achieved by improving the research system which would be able to increase the number of appropriate agricultural technologies. As per PAD the target of research proposal to be awarded under CGP: YR1-15, YR2-40, YR3-100, YR4-100 and YR5-100

KGF, as a newly established organization, initiated its activities in August 2008. During 2009-10, fifty four (30+24=54) projects were awarded in phase-I and phase-II. CGP research projects have been awarded to various research institutions/universities/NGOs/ (Annex- iv and v). In the phase-I 30 CGP projects were awarded in May/09 out of which 3 has been completed in June/2010 ie 12 months of implementation period. In the phase-II 24 projects started their implementation from November/December 2009.

It is expected that upon completion of the phase-I and phase-II CGP research projects incremental number of agricultural technologies would be developed towards achieving the developmental objectives of NATP.

III. Technical Progress of CGP project

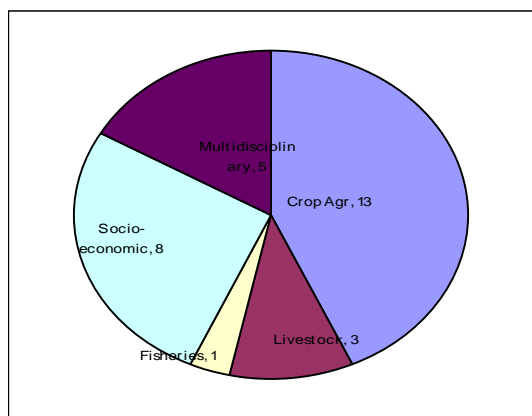
KGF was formed in 2007; however, it got momentum only after the appointment of its Executive Director in August 2008. BARC released priority thematic research areas for Competitive Grants Program (CGP) and KGF invited research proposals in three daily news papers in October 2008 from the interested researchers of NARS institutes, universities and NGOs. KGF arranged to float the guidelines for preparation of Research Project Proposals (RPPs) in the website with simultaneous arrangement to distribute the hard copies to the interested researchers.

In pursuant to advertisements in the newspapers and website, a total of 393 proposals were received from different organizations, both public and private. Out of 393 proposals, 145 became non-responsive as those proposals did not comply with the criteria and requirements set in the guidelines and were, therefore, rejected at preliminary screening.

The KGF Board constituted a 12-member multi-stakeholders committee for screening and short listing of the promising project proposals for review. The committee screened the remaining 248 proposals and preliminarily selected 103 viable proposals for expert evaluation. KGF earlier developed a list of potential reviewers drawing experts and professionals from various research institutions, universities and extension organizations. KGF invited the Principal Investigators of the 103 short listed proposals to present their research highlights in a stakeholder workshop before the expert reviewers held in March-April 2009 at BARC. Out of 103 selected projects, PIs of 101 projects turned up and presented their proposals before the experts and scientists at BARC. Individual/independent expert reviewers evaluated and graded the proposals following standard evaluation criteria based on 100 scores as set in the BARC Research Manual.

KGF formed a standing committee with multi-disciplinary experts to make recommendation to the KGF Board for awarding CGP grants to winning proposals reviewing the expert reviewers' grading and comments for making. The standing committee recommended to the Board for funding 49 proposals out of 101.

Research proposals were invited on specific thematic areas as specified by the BARC. Distribution of the CGP Phase I projects based on thematic areas are presented below:



Sector wise Distribution of CGP project (Phase- I)

KGF Board reviewed the evaluation of both independent/individual experts assessment of the proposals and standing committee's recommendation and accepted 66 proposals to be implemented in two phases (Phase- I and Phase-II) for convenience of monitoring and management. In the phase I 30 research projects were awarded in May/2009. The remaining 36 projects were further reviewed by the Board and 24 research project were finally awarded in Nov/Dec 2009.

A. CGP Phase-I Projects

Implementation of 30 projects in the first phase began in May 2009. A list of 30 Projects awarded in Phase I is given in Annex-iv. Locations of the project site are shown in Annex-1. Out of the 30 projects in CGP Phase I, 18 are from NARS Institutes and Public Universities and 12 from NGO or GO/NGO collaborative arrangement for implementation.

Research proposals were invited on specific thematic areas as specified by the BARC. Distribution of the CGP Phase I projects based on thematic areas are presented in tabular form below:

Implementation of CGP Phase I Projects began formally with signing of MOU between ED, KGF and authorized representative of the implementing organization which is the last stage of grant making process. Principal Investigators (PIs) from NARS institutes, universities,

Major Discipline	Thematic Area	Number of projects
Crops	Climate Change	1
	Coastal Agriculture	1
	Farm productivity Enhancement	3
	Farm Machinery	1
	High Value	2
	Hill Farming	3
	Post Harvest Technology	2
	Seeds & Planting Materials	2
	Soils	2
	Varietal improvement and Genetic Resources	2
Fisheries	Database Development	1
	Socio-economics	3
Livestock	Diagnosis and Diagnostics	1
	Health Management	2
Socio-economics	Marketing and Supply Chain	4
	Total	30

private organizations and NGOs are the key partners for implementing the projects on the ground. Immediately after signing of MOU, fund release to the implementing organization started as per payment schedule outlined in the contract agreement. Generally, the mode of payment is as follows: i) Upon signing of MOU-20% of the 1st year budget, ii) Upon submission of the inception report (acceptable to KGF)-30% of the 1st year budget and iii) Upon submission of the Half Yearly Progress report along with M&E report (acceptable to KGF)-30-50% of the 1st year budget. At the end of the project year-1 and after receiving the satisfactory annual implementation progress report from PIs and monitoring

report from KGF monitoring teams, second years' budget is released following the payment schedule as outlined in contract document.

For smooth implementation of the projects, KGF organized workshop with PIs at the early stage to review the implementation plan and the result framework approach for each project. PIs were required to produce a number of reports during the project period as an activity output for submission to KGF on specified time as per reporting obligation. These reports also serve as basis for assessing the implementation progress of the projects. Besides, coordination meetings at organizational level with DG/ Directors as well as at project level with PIs were held at regular intervals to assist proper implementation of the projects. Moreover, the implementation progress of the on going research projects were monitored

periodically (4-5 months interval) by field monitoring teams comprising KGF professionals.

CGP projects are primarily of short term in nature. While most projects are of two years duration, only 3 projects were completed in one year. Once the projects are in completion stage the KGF evaluates the outcomes and performance of the projects. At this stage KGF engages experts of NARS institutions to join evaluation teams. KGF held an Annual Workshop to review the progress of implementation of CGP Phase I on completion of one year in May 24-26, 2010.

A.1 Crops Sub Sector:

i) Thematic area: Soil

C-S-132: Agricultural land loss and food security: An assessment

Increasing food demand due to population growth in one hand and shrinking of arable land due to increasing urbanization and industrialization are two realities in Bangladesh agriculture. Conversion of agricultural land into non-agricultural purposes has been a great concern for food security in the country. The 12-month study aimed at estimating the amount of agricultural land converted to non- agriculture and consequent loss of agricultural production in Bangladesh. It was primarily based on a field survey through interviewing farmers in 24 villages carried out in mid-2009. Villages were sampled randomly, four from each of the six administrative divisions. In total 600 households were selected for interview.

The study finds that during the eight year period from 2001 to 2008, annual conversion of agricultural land amounts to 0.56 per cent. This was much less than the earlier reported figure of about one per cent. Highest rate of conversion was noted in Dhaka division (1.45%) and the least in Khulna (0.26%). In such conversion 42% of land owner households were involved. Among the different land ownership groups maximum rate of conversion was recorded among the functionally landless households (2.86% per year) and the least was in the large land owner group. The main non-agricultural uses of converted land were identified to be housing, road construction, business establishment and educational and health organizations occupying 55,10,8 and 3 per cent of the converted land respectively with little variations among the five land ownership groups.

Based on the current estimated rate of conversion (0.56%) per year annual loss of rice production in Bangladesh amounts to 0.223 million tons or 0.86% of the country's annual rice production. Similar exercise using loss of paddy (24 kg) per land owner household, total amount of loss of rice comes to 0.302 million tons or about 1.16%. Available information indicated that the conversion of land benefits the converter households in terms of higher household income and improved level of food security.

To arrest the increasing rate of land conversion, policy suggestions were made which are a) agricultural occupations are to be made more profitable and attractive compared to non-agriculture and at the same time special tax may be imposed on the conversion of agricultural land. b) Area specific ceiling for different non-agricultural uses may also be imposed. Open discussions with the respondents in this respect also recommend for strict control of population growth and increase of land productivity through adoption of modern technologies and effective agricultural extension services offered by the Department of Agriculture Extension (DAE) which needs suitable reorganization. c) The country's industrialization policy-2009 when finalized may also fix the land area needed to set up small, medium, large industries in different divisions of the country.

Recommendations and Uptake Pathway:

Findings of the study suggest that the rate of conversion of agricultural land into non-agricultural purposes is 0.56% annually which is much less than the rate usually claimed. Conversion of agricultural land into households shares most, and the maximum rate of conversion is recorded for functionally landless households. The study also suggested some policy measures.

Beneficiaries

Agricultural land loss being a national concern, any effective measures in arresting loss would be a great contribution towards agricultural production and food security. Government may benefit reviewing and considering the suggested policy options.

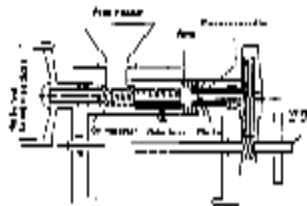
C-S-144: Maximizing yield of tea in some selected problematic acidic soils through improved management practices

Tea is an important crop contributing substantially to earning foreign exchange. However, the yield of tea in Bangladesh is very low compared to other tea growing countries. In the category of low productivity zone, average yield of tea is around 300 kg per ha. The low yield of tea is mainly attributed to high soil acidity. The project has been undertaken to increase tea yield by improving soil properties through liming and application of organic matter. Three experiments are being carried out and results of the experiment will be available toward the end of the project period. In expt 1 liming effect is being evaluated using five doses of dolomite viz. 0 ton, 0.5 ton, 1 ton, 2 ton and 3 ton/h broadcasting in the old and exhausted tea soil. The preliminary indication shows that application of dolomite at 2 tons/ha improves plant growth better. The second experiment compares different (i. broadcasting, ii. furrow, iii. ring and iv. half-moon) methods of fertilizer application in the sloping land. Half moon method of fertilizer application in tillah soil shows better than other methods. The 3rd experiment is on the methods of agro-techniques i.e. pegging, decentering etc. with liming in the young plants. Here the initial result shows that plant performs better under decentering with liming @200 gram/ plant.

ii) Thematic area: Farm Machinery:***C-FM- 163: Development of small scale electric powered oil expeller suitable for adaptation among the rural farmers in Bangladesh***

In a 12 month-project, a small sized electric powered oil expeller has been designed, developed and tested. The expeller has been tested on-farm and replicated by producing two more machines that would be given to farmer groups at two places in Madhupur and Muktagachha in Tangail and Mymensingh districts, respectively. The power expeller is of high efficiency with a crushing capacity of 50 kg rapeseed mustard in one hour against 15 hrs required for indigenous ghani. The cost of crushing would also be reduced substantially using the power expeller.

Comparing efficiency of newly developed power expeller		
	Ghani	Electric expeller
Time	25 hrs	1 hr



Cost/kg	Tk 35	Tk 18
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The smaller sized oil expeller would be useful primarily to small entrepreneurs but the small farmers will also be benefited from this technology provided the small-sized, low cost machine is available at the community level. It is now necessary that appropriate manufacturers come forward for large scale production of this small sized machine.

Recommendation and Uptake Pathway:

The small sized oil expeller designed and fabricated may be adopted in rural areas of Bangladesh to benefit primarily the small enterprises. A modest amount of Tk. 350,000/- would be required to buy and install the oil-expeller. However, prior to enterprise development, the newly developed oil expeller needs to be commercialized. The manufacturing industries and business organizations have to come forward for large-scale production and commercialization of the oil-expeller. Department of Agriculture Extension may perhaps play a role in the uptake process.

Potential Beneficiaries:

Immediate beneficiaries of the project outcome would be development of small rural entrepreneurs in the vicinity of mustard and rapeseed growing areas. As enterprises develop and small sized electric oil expellers are in place, oilseed growers will also benefit from such enterprises. The farmers would not be required to travel long distances for processing of their produce.

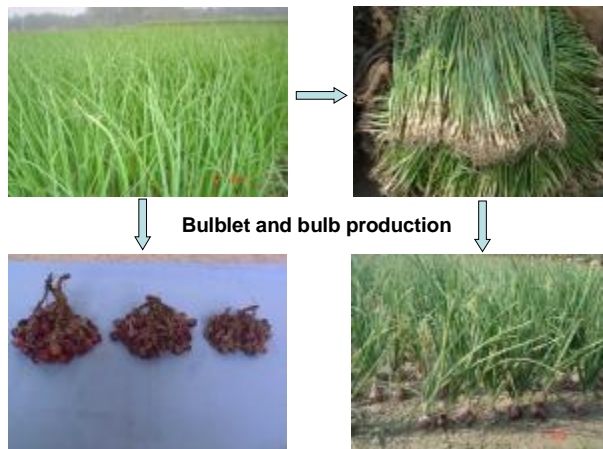
iii) Thematic area: Seed and Planting Materials

C-SPM-092: Quality improvement of farmers' stored seeds of mungbean, lentil and chickpea and its relation to disease development in Bangladesh

Farmers' stored pulse seeds very often are not of good quality. The study seeks to examine the quality of farmers' stored pulse seeds and determine the relationship between the quality of farmers' stored seeds and disease development. Pulse seeds were collected from different pulse growing areas like Ishurdi, Magura, Meherpur, Chapai Nababgonj, and Barisal. Three hundred seed samples, 100 each of mungbean, lentil and chickpea, were collected from the sample farmers for seed quality analysis. Most of the seed samples had high moisture contents. Seed moisture contents varied from 12.8% to 13.2% in lentil, 12.6% to 14.1% in chickpea and 12.8% to 14.2% in mungbean. Averaged over the seeds samples the highest percentage of germination was 72.93% for lentil, 74.00% for chickpea, and 72.93% for mungbean. The highest percentage of healthy lentil, chickpea and mungbean seeds was found with an average of 62.8%, 63.5% and 61.8% in Ishurdi, Chapai-Nawabgonj and Barisal region respectively. Nine fungi species were detected in lentil seeds and 7 species in chickpea seeds. Among the detected fungi *Aspergillus* and *Penicillium* were dominant in both lentil and chickpea seeds. On –farm and on station experiments were conducted in different BARI's regional station and farmers' field to determine effective integrated seed management practices of pulses. The lowest percentage of mortality and disease severity was

recorded for seed treated with provex-200. Disease free healthy seeds and the seeds treatment with provex 200 gave the highest seed yield (1721 kg/ha and 1819 kg/ha respectively) in lentil. Likewise, seed treatment with provex 200 WP treated and sprayed chickpea crop produced the highest yield (2115 kg/ha) in all regions.

C-SPM-096: Seed Production of Summer Onion Varieties



Summer onion bears promise to increase production during summer season; but seed production limits expanding summer onion production. Despite several varieties of summer onion now being available, the production is constrained by lack of seeds. The project is to develop appropriate method of seed/seedling production for increasing yield. For summer onion, seed production can be done only in winter season. Moreover, seed setting rate of summer onion is usually low. Seed setting rate and agro-ecological conditions influence greatly on seed production of summer onion in summer season. However, appropriate method(s) for seed production has not been developed. To address these problems both on-station experiments and farmers participatory trials were conducted during 2009-2010 to determine the appropriate method(s) of seed production of BARI developed summer onion varieties (BARI piaz 2,3&5) as well as to explore the seed production potentials under different agro-ecological conditions. The major experimental activities are being carried out at the Spice Research Center, Bogra while on-farm validation trials are in five locations representing a wide range of agroclimatic conditions. Effect of time of production and storage period of bulblet on onion seed production was also studied. Studies on the identification of appropriate methods and effect of time of production and storage period of bulblet on summer onion seed production were conducted.

Among the methods studied, seed yield varied from 107.40 - 216.67 kg/ha. The highest seed yield (216.67 kg/ha) was obtained with bulb to seed method. Seed to seed method gave the lowest yield (107.40 kg/ha). Whether it was from seed or bulblet, bulb to seed always gave higher seed yield. However, bulbs that received longer storage time performed better.

With respect to time of production and storage period of bulblet on seed production, seed yield varied from 148.87-208.40 kg/ha, the highest being with the bulblet produced from 1st April sowing and storage up to October. Bulblet production from 1st July sowing gave the lowest seed yield (148.87 kg/ha). Results clearly indicate that the longer the storage period of bulblet prior to planting, the greater was the seed yield of summer onion.

Under different agro- ecological conditions, seed yield varied from 237.5-410.70 kg/ha, the highest being at Godagari, Rajshahi(410.7 kg/ha) & the lowest at Munshirhat, Thakurgaon (237.5 kg/ha). 383.3 kg/ha & 275 kg/ha seed yield were recorded at Kadamshahar, Rajshahi & Belabash, Faridpur. Among other factors, agro-climate had marked influence on the seed yield of summer onion. Higher seed yield was obtained in Rajshahi region where humidity was lower than that of other locations which might have caused lower insect pests & disease incidence, and greater seed setting rate leading to higher seed yield.

iv) Thematic Area: Climate Change:

C-CC-129: Assessing the long-term impacts of climatic vulnerabilities on crop production and evaluation of adaptation practices in the vulnerable areas of Bangladesh

Agriculture in Bangladesh is highly vulnerable to climate change. The major disasters and environmental vulnerabilities are floods, flash flood, droughts, cyclone, salinity, tidal surges, submergence, river bank erosion, soil erosion & land slides in hills, extreme temperature and low light intensity, fogginess, incidences of pests and diseases etc. The study aims at making an assessment of climatic hazards, their impact on crop production and possible adaptation practices.

Study showed that the average cropping intensity in the coastal areas has not increased as much compared to flood plain agriculture elsewhere in the country during 1975-76 to 2005-06. But there is a great change in the use of agricultural lands into other purposes due to climate change based on profitability. Study showed that a sizeable amount of cultivable land (about 30-50% of net cultivated area) remains fallow in rabi and Kharif-I seasons in Cox's Bazaar, Patuakhali and Satkhira districts.

In the drought prone areas, land is kept fallow during winter and Kharif-I season after harvest of T.Aman due to moisture stress and difficulties in land preparation in heavy clays/cracking clays. Zero tillage (maize), mulching (potato) and priming (chickpea) are promising adaptation options. In the floods/flash flood areas, crop is lost due to floods/flash floods or water stagnancy. In the coastal zone, crop is damaged due to salinity, flood/water stagnancy or tidal surges. No crop is cultivated during kharif season due to standing water in the field. Flood/tidal surge water recedes late from the crop field. Rabi crops can not be grown here due to soil wetness having swelling clays creating problems in land preparation. In the hilly regions, changes in distribution of rainfall pattern and intensity due to climate change causing/increasing soil erosion and land slides. Some innovative practices like agro-forestry farming, zero tillage following dibbling/pegging method (ginger, turmeric), rain water harvest technology, foot hill terraces, improved jhum, community based seepage water harvesting, homestead gardening, floriculture technology etc have been identified/ documented as adaptation practices in the hilly regions.

Field trials on some selected innovative farming practices have been initiated in the vulnerable areas since November-December/2009 as follows:

- i) Rajshahi-zero tillage (maize), priming (chickpea) & mulching (potato and sesame)
- ii) Satkhira-Sorjan system, salt-tolerant M.bean
- iii) Patuakhali-Sorjan system
- iv) Sirajganj Sadar-Promoting cultivation of Kaon, groundnut, Sweet gourd and Zuzubi with seasonal vegetables in Char lands through on-farm trials.
- v) Khagrachari-Zero tillage (ginger, turmeric), improved jhum practice

v) Thematic Area: Coastal Agriculture

C-CA-117: Adaptation of suitable crops in saline soils of Noakhali,

Crop production in dry season in Noakhali and other coastal districts is constrained by soil salinity. The project aims at identifying salt tolerant crops/crop varieties suitable for growing in dry season in Noakhali charlands. 11 crops - barley, cowpea, chilli, wheat, sunflower, mungbean, soybean, sugarbeet, and many of the crops with several varieties, are being screened for their tolerance to soil salinity of varying degrees developed under natural conditions. This on-farm experiment at Subarnachar has been designed in a way that multi-stage screening of crops and varieties to variable salinity could be done. Three crops – barley, sunflower and sugarbeet are found to have fairly high degree tolerance to moderate to high soil salinity. A local variety of chilli and sweet potato are also found to have moderate tolerant to salinity up to 10-12 dS/m.



vi) Thematic Area: High Value Crops:

CGP C-HV – 194: Assessment of effectiveness of IPM practices for pest management in brinjal

Brinjal or egg plant is the most popular vegetable widely grown in Bangladesh. Fruit and shoot borer is the most notorious insect pest that cause menace to the crop. Brinjal farmers spray insecticides to control the insect. Spraying of insecticides to brinjal not only causes environmental problems, residues remaining in brinjal fruit is a potential health hazard for the consumers. The project is an attempt to develop and adopt appropriate IPM method(s) for controlling top shoot and fruit borers of brinjal in selected areas of Mymensingh and Jamalpur districts through farmers' participatory trials. 100 farmers each at Char Algi, Gafargaon (Mymensingh) and Islampur (Jamalpur) have been involved in the project. Each of the participating farmers planted brinjal on 1 bigha (0.134 ha) land. Farmers were imparted training on the IPM



visitors compare IPM methods for pest management efficacy

techniques of brinjal pest management. They were also provided with required inputs for growing the crop. Four different pest management techniques (*T1- pheromone trap, sanitation and release of biocontrol agents, T2- barrier cropping, T3- pheromone trap and spraying of tracer, and T4- insecticide spraying*) compared with farmers' traditional practices are being evaluated. Each farmer raised brinjal administering five different pest management treatments and recorded the effects thereof on the productivity and efficacy of controlling borers. Wide range of variations in yield was observed due to different pest control measures adopted and across locations. Irrespective of variations across treatments, brinjal fruit yield was higher in Gafargaon than in Islampur. At both the locations, integrated pest management with Pheromone trap, sanitation and release of bio-control agent gave the highest yield (51 tons/ha with BCR value of 5.98). In Gafargaon farmers adopted existing practice gave the lowest yield (20.3 t/ha, with BCR value 2.45).

C-HV-197: Standardization of production practices and technology transfer of BARI Strawberry-1

As a high value crop, strawberry has been rapidly gaining popularity in Bangladesh. Bangladesh Agricultural Research Institute (BARI) has recently released a variety BARI – strawberry-1; but its production practices for growing in varied agroec-ecological conditions have not been developed or standardized.

The present project aims at developing and standardizing production practices for growing strawberry under different agro-ecological situations including roof-top gardening. Five field experiments were carried out during 2009-2010 growing season at BARI, Joydebpur. In one experiment runners of BARI-1 Strawberry were planted at 6 dates (Oct 1, Oct 15, Nov 1, Nov 15, Dec 1, and Dec 30) at four row-spacings (30, 40, 50 and 60 cm). The second experiment, strawberry runners were planted at 4 row spacing (30,40,50 and 60 cm) and using 4 mulch materials (black polythene, transparent polythene, rice straw and without mulch). Ten variable soil amendments formed the treatment structures of the third experiment. The fourth experiment compared the effect of 6 variable combinations of nutrients on the productivity of strawberry. The 5th experiment was on the effect of weed management and mulches on yield and yield attributes of BARI Strawberry-1. Apart from the field experiments, one pot experiment was also conducted to standardize pot size and pot media for using in the roof top gardening.

Experiments have been conducted in one season and analysis of data is in progress.

C-HV-202: Global market analysis for production and export potentials of high-value crops in Bangladesh.

The project is for documenting the prospect of growing and exporting high value crops through collecting information and data analysis for identifying the crops that world market has strong demand and also to identify crops that are having strong demand, can be grown in Bangladesh. Analyzing data of 30 crops of global importance and tracking production and trade of those crops for the past 15 years, project identifies five crops that have strong demand worldwide. Banana has worldwide market demand. In Chittagong hill districts (Khagrachhari, Rangamati and Bandarban) a huge quantity of exportable banana can be grown in Bangladesh without affecting country's food security. Cashewnut and strawberry are the two non-traditional crops having durable and high demand in the world market can be grown in the country. Demand for barley in the European market is quite high that can be grown in the saline soils in the coastal areas of Bangladesh.

vii) Thematic Area: Hill Farming

C-HF-103: Validation of improved agricultural technologies at farmers' fields in hill farming system:

Research for generating modern production technology for growing crops so far by-passed the south-eastern hilly region. Production technologies developed for and adopted in plain lands often do not meet the requirements of hill farming. The project targeted some 90 small and marginal farmers to improve income and livelihood adopting home garden model that facilitates growing vegetables round the year. Home garden model suitable for adoption by hill farmers under the socio-economic setting of the tribal people has been developed through farmers' participatory research. Participating farmers have been given training, seeds, and saplings.



C-HF-104: Ecological determinants of bamboo flowering and rodent population outbreaks in the Chittagong Hill Tracts

Rodent outbreak following bamboo flowering is a well accepted phenomenon. However, because of long interval between two flowering events and rodent outbreaks, scientific studies on the relationships and ecosystem analysis are rare. Linkage between bamboo flowering and rodent outbreak has not been scientifically proven and rat floods following bamboo flowering might be speculation; but occurrence of rat floods and crop damage are well documented. The project seeks to understand the ecological consequences of bamboo forests undergoing synchronous gregarious flowering, seed masting, senescence and regeneration on small mammal and other vertebrate species population dynamics and their impact on crops and livelihood of nearby rural communities.

The project conducted monthly trapping of rodents in different habitats. Both trap barrier system (TBS) and bamboo fence were effective against rats of Jhum fields. Community trapping performance shows better results for preventing stored food, and other house hold materials.

Rats captured by using trapping suggest a high degree of species diversity; *Rattus rattus* and *Mus musculus* being the dominant rodent species. 13 rat species have been captured, out of which 08 species have been identified and the rest 05 species are on the process which may be new species. A highest of 17 embryos were found in *Rattus rattus* species. More than 70% female rats were found in breeding condition.

All captured species eat *Melocanna* bamboo seeds, *Rattus rattus* is the dominating species in bamboo forest area. Bamboo flowering initiation may be related to altitude, higher the altitude earlier is bamboo flowering. One third of bamboo seeds were found rat damaged. However, germination rate of bamboo seeds was very high (>90%).

viii) Thematic Area: Post Harvest Technology:

C-PHT- 175: Up scaling and adoption of hybrid dryer for quality grain seed production.

Quality of seeds, particularly cereal seeds, depends largely on the seed moisture content at the time of storage. Most seeds retained and used by farmers are sun-dried and appropriate moisture content (<13%) is not maintained in most cases. This is more true in case of seeds processed during rainy season. Using mechanical dryers for seed processing presents problems either due to excessive heat or low heat. Excess moisture results in loss of viability and insect and disease infestation. The present work aims at developing and adopting of hybrid dryer modifying the available dryers for large scale adoption.

During the year under review a hybrid seed dryer was designed and developed suitable for drying of a given amount of grain seeds. Critical temperature for drying paddy seeds was determined to be 42°C. Time required for drying 250 – 300 kg seeds of different crops using the newly developed dryer was determined. Results of the trials are presented in Table 3. Seeds dried in the dryer showed germination percentage of about 90% and vigor index of 1.0.

Table 3. Efficiency of hybrid seed dryer



Crop seeds	Quantity of seeds (kg)	Time required (hrs)
Paddy	250	17
Wheat	250	12
Maize	300	16
Groundnut	200	20

C-PHT-179: Increasing storability of potato in natural storage and income generation through small scale processing of potato

The major focus of the project is to develop low-cost, appropriate storage technology that farmers can adopt for storing potato at farm level. Post-harvest processing technology is also being developed in order to assist small farmers in using potato for preparing food items including potato chips at household level. Varieties, fertilizer dose and irrigation method exert significant influence on tuber yield and dry matter production that eventually influence the quality and quantity of potato chips.



As the research works are still going on and will continue for another year, comprehensive findings cannot be obtained at this moment. However the preliminary result shows that the method of potato stored in modified natural condition is economically beneficial than the farmers' existing method. Haulm pulling, harvesting time, different doses of potash fertilizers and irrigation etc. had a significant effect on tuber yield, dry matter and grades. The potato varieties Asterix, Courage, Diamant, Felsina and Lady Rosetta were found more suitable than other varieties.

ix) Thematic Area: Varietal Improvement and Genetic Resource

C-VI- 006: Collection, Conservation characterizations and varietal development of Garlic and Onion through selection and molecular techniques

Garlic and onions are two important spice crops having high consumer demand in Bangladesh. Persistently there has been a wide gap between production and demand for these crops in the country. Because of its allicin and related disulphide contents, garlic has also great medicinal value. The yields of garlic and onion are low in Bangladesh and potential exists for improving yield. With a broad objective of developing high yielding varieties of onion and high yielding garlic varieties with high allicin content, the project seeks to collect and characterize garlic and onion varieties.

During the first year's project activities 37 germplasm have been collected and planted. Laboratory analysis for allicin content of 24 accessions has been completed. Morphological and molecular characterization of the germplasm is being done.

C-VI-025: Rice germplasm collection and conservation from hilly, coastal, haor and other areas of Bangladesh

The project was designed to collect cultivated and wild rice germplasm from unexplored areas especially from hilly, coastal, haor and other areas of Bangladesh. The exploration and collection program was done during May, 2009 to April, 2010 in missions through directly by BRR I Scientists from the field and through DAE and Rice Seed Net partners of BRR I from the farmers stock. Fifteen batches (280 personnel) orientation training were conducted on importance and procedure of rice germplasm collection. A number of 430 samples of Aus from hilly, coastal, haor and other areas of 40 upazilas of 10 districts; 33 samples of Boro from coastal, haor and other areas of 10 upazilas of 7 districts and 330 samples of Aman rice germplasm from coastal, haor and other areas of 28 upazilas of 13 districts were collected. Two hundred and fifty samples filled in passport data form of the collected samples were

registered. All the collected samples were dried, cleaned and stored in short term storage of BIRRI gene bank. Forty samples of Jhum rice were sown for seed increase during *Boro* 2009-10 season. Forty samples of Jhum rice were sown for seed increase and to characterize in current *Aus* season. Collection program through DAE and Rice Seed Net partners is on going. At least four reports on exploration, passport data and training materials were prepared during the reporting period.

x) Thematic Area: Farm Productivity Enhancement

C-FPE- 049: Wider adoption of modern rapeseed, mustard and sesame varieties with production technology for yield gap reduction

The project seeks to reduce yield gap in mustard and sesame at farm level through introducing improved varieties and improving farmers' knowledge and skill in crop production imparting training. Four improved varieties of rapeseed-mustard have been grown and compared with local varieties in farmers' fields in Manikganj and Faridpur districts.



Rapeseed-mustard trial was planted to a total of 17.14 acres (6.939 ha) of land while sesame trial was conducted on 16.0 acres (6.478 ha). All the trials were set in farmers' field within optimum sowing times. Rapeseed-mustard seed yield differed a little across locations that ranged between 1182 and 1249 kg/ha. However, averaged over locations, there was significant variation in yield due to varieties. BARI-15 out-yielded all other varieties giving 1538 kg/ha which was

followed by BARI-14. Farmers' traditional local varieties produced the lowest yield giving nearly 50% less yield compared with BARI – 15.

C-FPE-054: Up-scaling of integrated rice–duck farming in Bangladesh: improvement of rural livelihood through community approach

Rice-Duck farming is a low-cost, organic farming method for small entrepreneurs, introduced in Bangladesh. Rice cultivation using duck is a new technique and an integrated approach that needs thorough study and research for improvement of large scale adoption by the resource poor rice farmers in Bangladesh. During cultivation of rice, weeds and insects are regarded as menaces that take away nutrients from the crop fields. However, the situation will change if ducks can be reared there whereby the weeds and insects that are considered evil will become food for the duck and the faeces/droppings of these ducks will provide nutrient to rice plants. It is, therefore, clear that duck is very useful for rice cultivation. It can control weeds effectively and will reduce the use of chemical fertilizer for rice cultivation. KGF funded rice-duck farming project was initiated in June 2009 by Padakhep Manabik Unnayan Kendra. Activities in the first season (T.Aman, 2009) were concentrated at Kendua Upazila of Netrakona district. Baseline survey was conducted on 100 farmers in Kendua Upazila and later 30 farmers learned the technology directly by participating training programs. Ten trials were set and out of these, three trial plots were established on community basis. A field day program was also arranged in the project site and project farmers and as well as neighboring farmers participated. Farmers attending the field day showed their keen interest on the

technology. Study in the second season (Boro 2009-2010) was conducted on community basis at Chalkbatta village, Chirang Union, Kendua Upazila of Netrakona district. A total 50 resource poor farmers (in 2 batches) participated in the training programs. Beside them, 25 farmers established trials as a community basis. From the T.Aman season experience, it was observed that the farmers are interested to adopt the technology due to higher income, higher grain yield (around 20%), effective weed control and considering safe agriculture.

In the next phase the up-scaling the technology will be in Kotiadi upazila, Kishoreganj district for T. Aus 2010 and T. Aman 2010. A baseline survey has been completed on 100 selected farmers to start T.Aus 2010 season in Kotiadi upazila of Kishoreganj district Padakhep Manabik Unnayan Kendra is responsible to provide technical services, information, training and support to the farmers. The community rice-duck farming system is expected to reduce farmers' transaction and operational costs and improve other benefits.

C-FPE-055: Impact of rice-wheat/potato-mungbean cropping system on farmers' employment opportunity

The research project is an initiative of the Bangabandhu Sheikh Mujibur Rahman Agricultural University to generate employment opportunity for the unemployed rural poor in munga prone northern districts through improving cropping systems incorporating short-duration high yielding rice varieties in aman season and a new crop mungbean during post-wheat or potato in kharif I. First year's results indicate that growing of BU dhan 1 in aman season not only generated employment opportunity during munga period and increased yield but also facilitated timely planting of potato and wheat that eventually increased yields of potato and wheat by as much as 12% and 19%, respectively. Fitting of an additional mungbean crop after harvesting rabi crops resulted in labor employment of 124 days and a mungbean yield worth of nearly Tk. 53,000.

Aman rice (BU dhan 1)	Early harvest Yield : > 10%. Timely planting of potato/wheat
Wheat	18.5%
Potato	12.3%
Mungbean (BU mung 4)	Yield (+) 802 kg/ha Labor: 124 Income: Tk 52,715/ha



A.2 Livestock Sub Sector:

XI) Thematic Area: Diagnosis and Diagnostics

L-DD-232: Molecular characterization of poultry Salmonella and production of formalin killed Pullorum disease vaccine using local isolate in Bangladesh

Pullorum disease is one of the most common infectious diseases in chicken in Bangladesh. Pullorum disease is caused by Salmonella enterica subsp enterica serovar Pullorum. The most important and effective tool to prevent and control the pullorum disease would be to develop

and use effective vaccine to the layer or breeder flock. For production of the vaccine master seed of Salmonella Pullorum bacteria from local isolate is important.

Twenty pure cultures of Salmonella Pullorum bacteria have been isolated from 100 field samples using various laboratory methods and approaches. The pure cultures were tested employing different methods. For confirmation of this bacteria PCR method was adopted and detected the Salmonella Pullorum bacteria. The primers 139(F) (5'-GTG AAA TTA TCG CCA CGT TCG GGC AA-3') & 141® (5'-TCA-CAC CGT CAA AGG AAC C-3') for invA gene were used.

One of the 20 isolates of Salmonella will be used as master seed for production of pullorum disease vaccine. Works are in progress for production of vaccine and testing thereof.

XII) Thematic Area: Health Management :

L-HM-214: Study of herd health management practices for Ruminants in Bangladesh

Study was conducted in three locations: at Charkamarkhanda (Sirajgonj), Simulia (Manikgonj) and Vastara (Jamalpur) with specific objective of making an assesment of usefulness of the existing treatment, preventive vaccination, de-worming and other health management practices.

Baseline survey has been completed among randomly selected three villages. Farmers have been motivated to have the mandatory vaccination against the disease BDHS, FMD and PPR as well as de-worming. Health management data cards have been distributed among the selected households. Almost all ruminants in three villages were vaccinated against FMD-489, Anthrax-503, BQ- 308, PPR-51.

L-HM-219: Improving Livelihood through herd health management and milk market access to poor farmers living in the Northern Bangladesh

Study was conducted to identify bench mark scenarios of dairy and non-dairy households in relation to their assets and living standard. After selection of households, a package delivery of veterinary service was given to improve the health condition, milk yield and fertility of cows together with development of the milk market channel in Char area of Northern Bangladesh.

The study showed that 718 (50.1%) and 716 (49.9%) of the people from 12 villages of Sariakandi, Islampur, Belkuchi Upazilas (sub-district) were involved in dairy [150 (50/area)] and non-dairy[150 (50/area)] farming, respectively. Ownership of 5 and 10 decimals homestead area of dairy group were 62%, 16%; 66%, 12%; 57%and 14% in Sariakandi, Islampur and Belkuchi Upazilas, respectively. In the same group, cultivable land of 10 and 20 decimals were recorded in 53%, 10%; 48.6%, 14%; 33% and 18%,respectively.

All selected animals were immunized with Foot and Mouth Disease, Anthrax, Black Quarter and Haemorrhagic Septicaemia vaccines at the beginning of the studies. Deworming (Triclabendazole INN 900 mg & Levamisole BP 600 mg @ 19.5 mg/kg body weight; Renadex®, Renata Animal Health Ltd, Dhaka) against common parasitic infestation was given orally and vitamin-mineral premixes [Vitamins AD3E 10,000,000, 1,000,000 iu & 10g, respectively and Trace Minerals Co-0.20g, Cu-1g, Fe-6g, I-1g, Mn- 1.20g, Se-0.01g & Zn-2g (Renavit DB® @ 1g/kgfeed) & Combination of Zn, Mn, Cu, Co & Amino Acid (Availa® 4

@ 4g/120 kg body weight orally)] were supplied daily. The milk yield and body weight of 581 cows was recorded in the three areas. The average milk yield increased from 1.4 to 2.0 litres/day/cow. Cattle health and body weight gain was improved.



Healthy cow after integrated vet. health care service at Islampur Char of Jamalpur districts, April 2006

A total of 39 sub-fertile cows from two areas (Sariakandi and Islampur) were synchronized using PGF2 analogue and 84.6% of the treated cows showed oestrus after an average of 68-70 hrs. Pregnancy (72.7%) was confirmed by rectal examination of the genital tract between Day 60-80 post services. Ten cows from Sariaknadi were served by AI using frozen semen and pregnancy was confirmed in 60%. Ten repeat breeding cows from Sariakandi and Islampur were treated with Gonadotrophin Releasing Hormone (GnRH) immediately after natural service. Pregnancy was confirmed as before, in 50% of the cows.

A.3 Fisheries Sub Sector:

F-DD-240: GIS and remote sensing database for spatial decision support system for sustainable shrimp culture in south- west coastal region of Bangladesh

Southwest coastal region of Bangladesh has experienced a rapid expansion in shrimp farming in the last decade. Congenial conditions such as availability of coastal land and water, successful transfer of hatchery technology and increased export demand led to this rapid expansion of shrimp culture. The rapid development of shrimp culture has been accompanied by many controversies and it demands a closer look at the environmental and socio-economic impacts. The ecological and social impacts of shrimp culture include large-scale degradation of agricultural areas acidification, salinization of ground water pollution of agricultural land and coastal waters by farm effluents, loss of hundreds of indigenous species and subsequent loss of goods and services generated by natural resource system. Conversely shrimp aquaculture has itself been affected adversely by environmental problems such as poor water quality and disease leading to reduced productivity and in some cases abandonment of shrimp farms. Considering all these, a systematic and scientific research work had been undertaken in three coastal districts of Bangladesh with the ultimate objectives of developing GIS and remote sensing database and identifying potential sites for sustainable shrimp culture.

For conducting the study satellite image and ancillary data like topographic and administrative maps of Bangladesh, soil map, shrimp culture related data such as types of the farm, culture area, method, production, source of fry, water source and seasonal availability of water, drainage system, water logging situation, disease outbreak, sanitation facility, road

communication, water quality parameters soil characteristics, land use pattern, land elevation, hazard frequency, depot facility, electricity supply, fisheries statistics and population census data etc were collected using different sensors, through laboratory analysis, questionnaire survey and also from different GOs and NGOs. Through this study a spatial (GIS) database has been prepared and suitable sites have been identified for sustainable shrimp culture. Few villages (7-10) have been identified as a suitable area for shrimp culture in the southern part of Bangladesh. These villages have been categorized into Most suitable, Moderately suitable and Less suitable area in 3 different upozilas: 1. Paikgacha (Khulna) 2. Rampal (Bagherhat) and 3. Shaymngar (Satkhira) upozila. The findings of the study will be of great value to planners, fish-farmers, and business community.

Recommendation:

A GIS and remote sensing database has been developed for southwest coastal areas of Bangladesh. The database may be used for decision making in delineating potential areas for sustainable shrimp culture in the districts of Bagerhat, Khulna and Satkhira.

Potential Beneficiaries

Shrimp culture industry may benefit using the database in site selection and management. The farmers can also potentially benefit from the database by identifying the most suitable area for shrimp culture. The communities and the country as well can reduce the negative impacts of shrimp culture on environment, agriculture and other sectors.

A.4 Socio Economics Sub Sector:

F-SE- 257 : Socio-Economics and livelihood development of aqua-products trader in urban and periurban areas of Khulna Metropolis

The project attempts to focus on socioeconomic survey of aqua-traders, market prospect assessment, inventory preparation, and culture feasibility study of aqua-products in Urban and Peri-urban Areas of Khulna Metropolis. Up to May 2010 socioeconomic and market prospect survey, database preparation and analysis have been made successfully. A total of 30 market places were selected in and around Khulna Metropolis. About 120 respondents have been interviewed and data have been gathered. Up to the mentioned survey status, socioeconomic condition has been documented, different technical laps and gaps have been identified as key barriers of livelihood development. Data compilation and analysis is on progress.

CGP F-SE-290: Factors affecting shifting from food insecurity to food security: A study of selected monga-prone areas

The study aimed at identifying the factors that enabled the food insecure households of 5 *monga*-prone districts of greater Rangpur region shifting to food secured over the last 5-10 years period disseminating these factors among the similar food insecure households through GOs (like DAE) and NGOs engaged in improving the food security status of food insecure families. Activities during the first six months of the project concentrated on staff recruitment, selection of study sites, identification of population households, selection of sample households, scanning secondary literature related to the study and preparation of data gathering instruments.

Based on key informant methodology, households that have shifted from food insecurity to food security were identified first using a brief survey. Another brief survey was then

followed immediately mainly for confirmation of the households identified by using key-informant methods as well as for getting some ideas about how these households have shifted from food insecure to food secure. These information were then used for constructing the main data gathering instrument (questionnaire). In all, 695 such households that constituted the study population were identified from all the 5 selected Unions of 5 selected Upazilas of 5 *monga*-prone districts of greater Rangpur. From these 695 population households 279 sample households (40%) were selected proportionately from all the study Unions of concerned Upazilas of concerned districts adopting systematic random sampling technique. Data from 33% sample households have already been collected. Data from remaining sample households (66%) are expected to be completed by June, 2010.

F-SE-291: Assessment of techno-socioeconomic resources and development of strategies for promoting food and economic securities of ethnic communities in Bangladesh

This study aims to assess the techno-socioeconomic resources and development of strategies for promoting food and economic securities of ethnic communities in three locations i.e. Ghoraghat upazilla under Dinajpur district, Modhupur upazilla under Tangail district and Durgapur upazilla under Netrokona district where mainstream ethnic people live. Out of 300 households, a total of 100 have been surveyed from the Durgapur area with structured questionnaires.

More than 50% of the respondents belonged to the middle aged group (35 to 50 years). About 43% respondents were illiterate among all the respondents whereas 33% respondents had primary education and 65% were engaged in agriculture as main occupation. Most of the respondents were marginal (0.21 to 0.5 ha land owner). Two dominant cropping patterns (fallow – fallow- boro; fallow- aman – boro) have been identified in the study area and rice is the dominant crop. Due to improper and traditional management, it was observed 38 and 52% lower yields in boro and aman seasons, respectively, compared to the potential yields. Many people are engaged in preparing handicrafts, bamboo basket, mat etc. Women were also engaged in those activities and household works. There is severe shortage of drinking water and a small canal, originated from the Indian hill and ended in the Shomeshwary River, is the only source of water. Thirty three per cent household incomes were contributed from rice production followed by forest resources and services. It was observed that October is the most food deficit time. Food security status was satisfactory in June, July, December and January due to harvesting of rice. More than half respondents have been suffering food insecurity for 2-3 months. Lack of capital was the major problem in the study area, which was opined by 85% respondents. Irrigation water was another big problem, which ranked second position. Some prospective areas have been identified, which can increase crop production, improve livelihood, window for income generation and contribute to the food security.



Group discussion with ethnic people in Modhupur

XIII) Thematic Area: Marketing and Supply Chain:

SE-MS-266: Processing of indigenous fruits and vegetables to improve livelihood of rural poor in Modhupur region

Fruits and vegetables are an important nutritional requirement for humans. Supply of fruits and vegetables generally are in short supply. But because of seasonality of production and distribution farmers growing fruits and vegetables face problems of low price because of market glut and wastage of produce. Most seasonal fruits and vegetables the Bangladesh farmers produce are perishable in nature. In contrast, the processed fruits and vegetables available in the markets, particularly in the towns and cities are of imported and consumers buy at high price. Food Technology Department of Bangladesh Agricultural University has developed a good number of technologies for post-harvest management and product value addition of fruits and vegetables that are potentially useful for small farmers and entrepreneurs. The project is being implemented for conducting research on product development from indigenous fruits and vegetables involving 120 resource poor farmers in Modhupur upazila of Tangail district.

E-MS- 279: Promotion of agricultural marketing in hills

The project has been taken up for the promotion of marketing in hills to ensure maximum efficiency for farmer selected crops in order to increase productivity, reduce costs and increase farmers' income for 500 households in Bandarban Sadar upzila. Marketing and supply chain is being developed for 5 horticultural crops - brinjal, bean, papaya, cucumber and bitter gourd.

First year's activities concentrated on only 2 crops - brinjal and bean. 200 targeted farmers have acquired knowledge on improved technology like pest management, fertilizer application, importance of irrigation on production, quality seed and high yielding variety seed, hybrid seed and benefit of early and late season plantation and crop rotation etc. The primary linkages have been developed among farmers; input sellers, input companies, DAE and output buyers etc.

SE-MS-285: Capacity Building of the Farmers through Exporting Comparative Advantaged Horticultural Products.

There are no analytical studies so far which considered the influence of exporting agricultural products on capacity building of the farmers at individual level specially the farmer who produces horticultural products. Therefore, the study was taken to explore comparative advantage of exporting horticultural products and its influence on capacity building performance of the farmers at individual level.

One district from each division ie Dhaka, Chittagong, Rajshahi and Khulna was selected for primary data collection. One hundred twenty farmers from each district was selected randomly who produce export oriented vegetable and flowers. The data were collected from the respondent farmers using an interview schedule. Some secondary data was also used for the study. Two alternative partial equilibrium measures of economic efficiency (a) Net Economic Profitability per unit of land and (b) the Domestic Resource Cost ratio was used to assess comparative advantage of different crops in Bangladesh agriculture. Policy Analysis Matrix (PAM) framework developed by Monke and Pearson (1989) was also used for

estimating domestic resource cost ratio. Capacity building ability of the farmers were assessed on the horticultural products which have comparative advantages of exporting. The indicators of different capitals in capacity building are technical, social, human, natural and financial capital. Different components of capitals were used to assess the capacity building ability of the farmers.

SE-MSC-287: Linking small farmers with supermarkets through promotion of peri-urban agriculture.

Economic growth, rising incomes, and rapid urbanization are the driving forces to shift food demand from traditional staples towards high-value foods. Growing supermarkets in large cities are the hub of supplying high-value food to the city dwellers. As the demand for high-value crops being rising, there exist opportunity of improving livelihood of small farmers linking them with supermarkets. The project seeks to link peri-urban small farmers with the emerging supermarkets in the country. 200 small farmers at two locations, Savar in Dhaka and Rangamati Sadar are involved in the project. The participating farmers at each location formed producers' organization. Being organized into producers' organization farmers are now empowered greatly acquiring a fair degree of bargaining capacity. The farmers are trained on growing and marketing five high-value crops.



A successful market chain has been developed and sustained. The project facilitated establishing linkage between farmers with two supermarkets - Family World and G-Mart in Dhaka and Swapna at Chittagong. In the year under review, farmers produced four crops – broccoli, capsicum, cherry tomato and strawberry. Unfavorable weather condition damaged production of capsicum in Dhaka. Rangamati farmers are now growing ginger during the rainy season; while having reviewed prospects and problems of ginger cultivation in the area peri-urban farmers at Savar decided to grow summer tomato instead.

B. CGP Phase-II Projects:

Having lessons learned through implementing the 30 projects in CGP Phase I and following suggestions of 4th Mission of the World Bank, KGF Board decided to get the remaining 36 project proposals further reviewed and improved prior to funding for implementation. One PI being engaged elsewhere declined to implement the project. Through the review of the Board 24 projects out of remaining 35 projects were accepted for implementation. A list of CGP Phase II projects is presented in Annex-V Before offering award letter and signing of MOU, KGF held a consultative workshop on 24 October 2009 with the PIs of 24 projects. The day-long workshop resulted in a set of suggestions for further improvement of the project proposals in the light of proposed Results Framework. Based on the suggestions and

recommendations, the PIs submitted the Full Proposals by the 1st week of November/09. First installment was released on signing of the MOUs by mid-November/09. KGF held a Workshop on implementation of CGP Phase-II projects in early 2009. Most projects in the second phase are on crop-agriculture sector and there was none on Fisheries sub-sector. The Projects are being implemented by the government and non-government organizations.

Apart from the above mentioned 24 projects in CGP Phase-II, one especial project has been accepted for funding on special ground. Citrus is a high-value crop with export potential. But the widespread prevalence of canker disease is a formidable challenge for citrus farmers and exporters. Hortex Foundation pursued the case with research organizations and the Ministry of Agriculture. In view of strong demand for development of appropriate methods of management and controlling canker disease of citrus, Bangladesh Agricultural Research Institute (BARI) prepared and submitted the research project to BARC, which was forwarded to the KGF. KGF Board had taken the proposal with due importance and got it reviewed by experts. Pending second call for research proposals, KGF approved the project for funding as an special project effective June 2010.

Special Project: -Study of Canker disease of citrus and development of its management practices in greater Sylhet and hilly regions.

Funding for CGP Phase-II projects began in December 2009 and activities of most projects began after January 2010. Details of the project information of both Phase I and Phase II projects are available in the data-base.

IV. Workshop, Training and Meeting:

A. Research Priority setting workshop

Bangladesh Agricultural Research Council (BARC) is primarily responsible for setting research priority for the national agricultural research system. As per rules (Memorandum of Articles & Association) of the Krishi Gobeshona Foundation (KGF), the responsibility of research priority setting for the KGF also rests with the BARC.

KGF has been actively engaged in assisting BARC in priority setting exercise. BARC has constituted 12 (thematic) groups of experts to prepare background papers and develop vision documents and medium to long term research priorities assessing available resources and institutional capacities, national needs, and global perspectives. The KGF shared the cost of this assessment and priority setting exercise and extended all possible assistance that the groups required.

The BARC requested the stakeholders (Extension Agencies and NARS institutions) to forward the researchable problems that the farmers are encountering with priority ranking. The KGF catalyzes the communications and actions. KGF and BARC jointly organized regional workshops at Bogra, Chittagong, Barisal, and Mymensingh to discuss and prioritize researchable problems. KGF assisted the BARC to organize the Regional workshop at Bogra and Chittagong.

A large number of stakeholders including representatives of agricultural extension agencies (DAE, DOF, and DLS), NARS institutions, agricultural universities, development organizations, farmers, agribusiness organizations and research leaders participated in the regional workshops. Based on the outcomes of the regional workshops and study reports of the 12 groups, a national workshop on priority setting was held at BARC on 1 June 2010.

Honorable Minister for Agriculture, Begum Matia Chowdhury and Secretary, Ministry of Agriculture Mr CQK Mushtaq Ahmed participated in the workshop as the Chief Guest and Special Guest, respectively. The priority setting exercise is almost drawing conclusion.

Research Priority Setting Workshop at Bogra:

A Regional Workshop on Research Priority Setting was held in RDA, Bogra on 29 December, 2009. Around 70 participants attended in the Research Priority Setting Workshop from different sectors like DAE, DLS, DOF, BADC, SCA, NGO, AIS, Researchers, Farmer representatives, Agri-Business representative, representatives from universities, Cotton Development Board and Water Development Board.

Workshop started at 10 am and continued up to 5:30 pm. After inaugural session all participants were divided into three groups for technical discussion. Sector wise groups were: Crops, Livestock and Fisheries.



A view of priority setting workshop at Bogra

Research Priority Setting Workshop at Chittagong:

Regional Workshop on Research Priority Setting was held in Regional Public Administration Training Centre (RPATC) Chittagong on 11 January, 2009. Around 140 participants attended the Research Priority Setting Workshop from different sectors like DAE, DLS, DOF, BADC, SCA, NGO, AIS, Researchers, Farmers representative, Agri-business representative, and representative from Universities, Cotton Development Board and Water Development Board.



A view of priority setting workshop at Chittagong

Workshop started at 10 am and continued unto 5:30 pm. After inauguration all participants were divided into 4 groups for technical discussion. Sector wise groups were: Plain land crops, Hilly crops, Livestock and Fisheries.

B. Workshops, training and meetings

KGF organized a number of sessions of training workshop sensitizing and motivating potential researchers for submitting improved research proposals for CGP funding. Before releasing fund for the second installment for the CGP phase II project, workshops were organized with all concerned PIs. Implementation plan and results-framework were discussed in the workshop. A coordination meeting involving projects PIs and Directors of the implementing organizations were organized at 6 months interval to discuss progress and problems of the projects being implemented. Annual progress workshop (on-going/completed) were organized and all the PIs submitted their reports after incorporating the evaluator comments. List of consultative and implementation workshop are shown in Annex -III.

V. Monitoring and Evaluation of CGP projects:

Monitoring and Evaluation (M&E) are integral tools for managing and assessing the efficiency and effectiveness of investments in agricultural research and development (R&D). It also helps to rectify/modify the strategy/actions for effective implementation of the projects. Periodical monitoring, review and progressive evaluation of the implemented projects were done to ensure that input deliveries, work schedules, targeted outputs and other required actions were proceeded according to time scheduled. Internal periodical monitoring of the project inputs and outputs during the implementation period with performance evaluation is the responsibility of the KGF M&E team. Soon after the approval of the inception report and fund release, KGF professionals outlined a detailed M&E plan comprising of periodic monitoring (both desk and field monitoring). A mechanism for maintaining regular contact with the PIs and participating organizations was developed. Internet connectivity with the researchers and stakeholders had also been established.

The success of an implemented project largely depends on how effectively the members of M&E team operate. In order to make a systematic periodical monitoring at field level, the 1st step is to locate the project implementation sites within the geographical boundaries of the country. The implementation sites of 54 (30+24) projects in two phases had been marked in two maps of Bangladesh which shows their regional distribution (Figs-1&2). The purpose of showing this geographical distribution was to assist M&E teams to visit more number of project sites by a single field trip and thereby to make M&E activities more systematic and more cost effective. Two teams were formed, each with two KGF professionals for M&E purpose. Each team had the responsibility to monitor all project sites within two geographical regions during the project period. However, two other professionals of KGF, i.e ED and Director (RM) would join any one of those two teams as and when situations demanded. In order to track project monitoring and progress record, a number of specific projects were allocated/assigned to each member of the monitoring teams. This ensured accountability of the concerned professionals about the key information on monitoring, progress and constrains of the projects under their disposal. A project monitoring format for both desk and field is given Annex-I . Review of project implementation progress report which included physical, technical and financial performance was the basis for desk monitoring. On the other hand, office/site visit, discussion with relevant persons and examination of relevant records were the basis for field monitoring.

A. CGP Project Monitoring

As many as 54 sub-projects in two phases were at different stages of implementation during this reporting period. The sub-projects under phase-I completed one year of their implementation. On the other hand, the sub-projects under phase-II completed only 3-6 months of their implementation. KGF professionals monitored almost all of the sub-projects particularly under phase-I at least once following monitoring format given in Annex- I. Monitoring report of one such project is given in Annex-II as an example.

B. Review and Evaluation

Principal Investigators (PIs) of CGP projects are required to prepare and present Half Yearly and Annual Reports on the progress of project implementation. While the Half Yearly reports are evaluated by the KGF professionals, Annual reports are evaluated by external reviewers as well as by KGF professionals. During the year under report, Half-Yearly reports and Annual Reports of 30 projects under CGP Phase I have been reviewed. Out of these, 3 projects being of one year duration have been completed and the PIs of these projects submitted completion reports. For the projects under CGP Phase II, PIs submitted their Half-Yearly Reports. The reports were reviewed. PIs in turn modified the reports based on the reviewers' comments and suggestions. In certain cases, there have modifications of project activities for clarity and achieving the intended objectives.

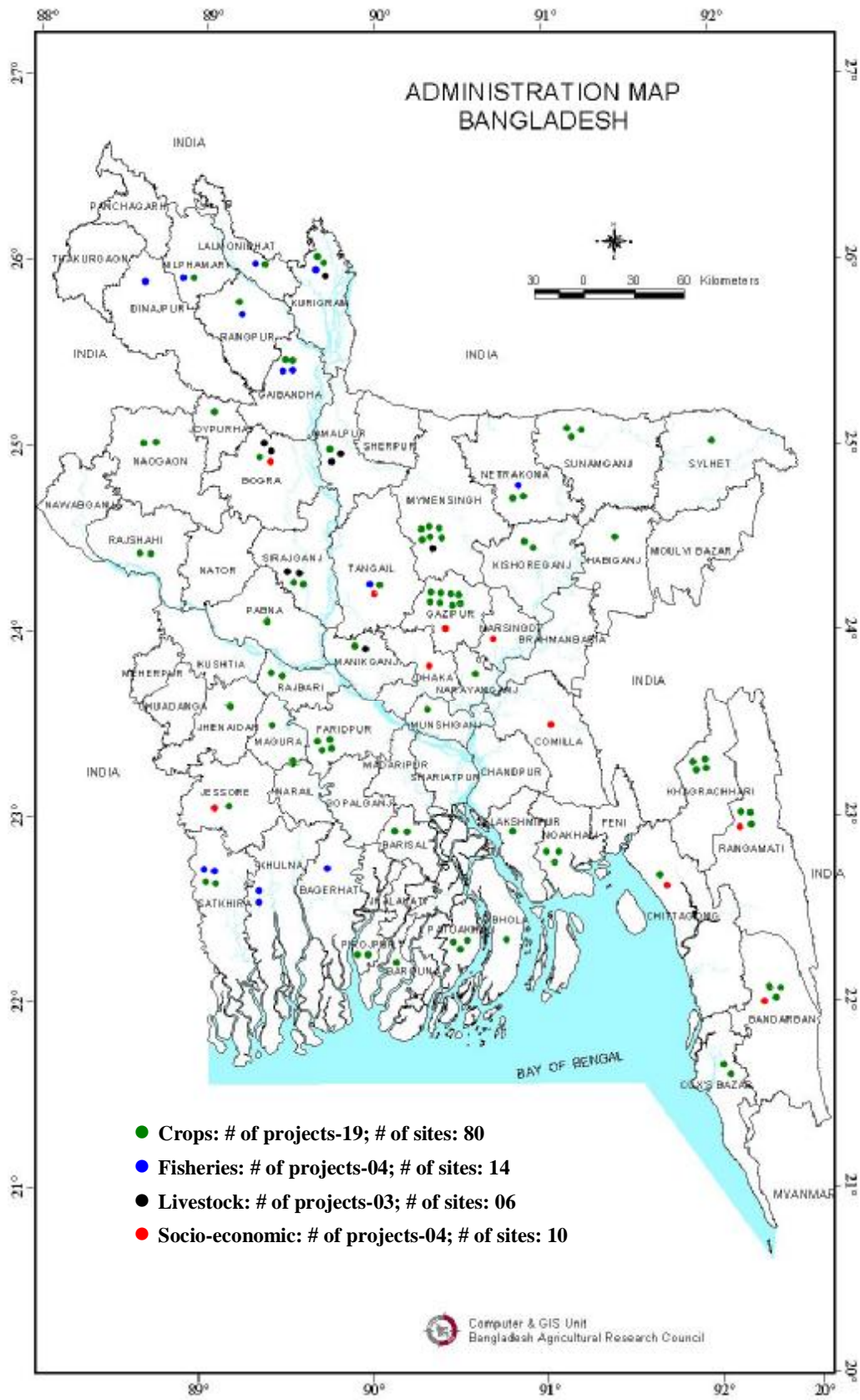


Figure 1: Distribution of CGP Projects (Phase-I)

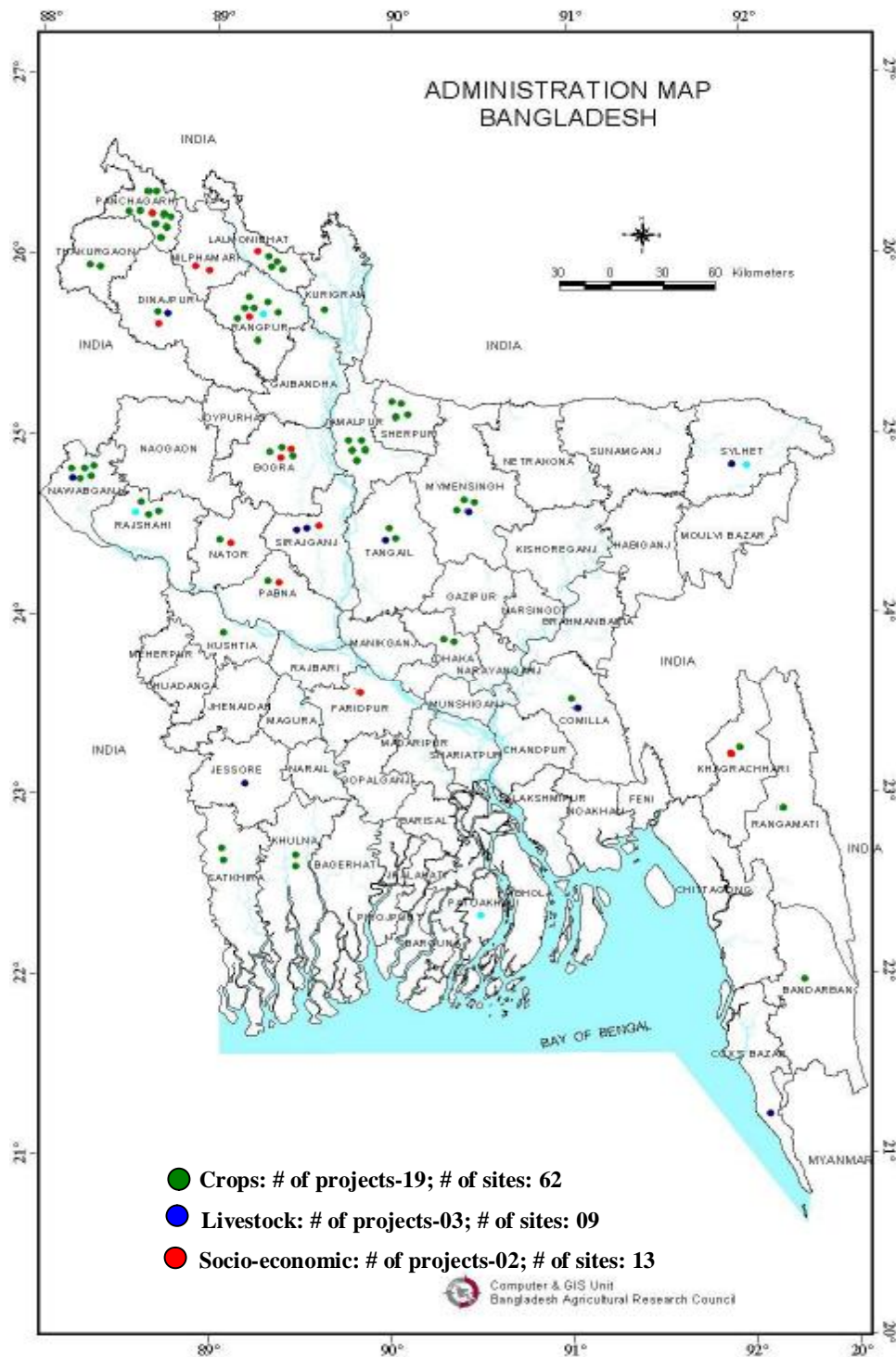


Figure 2: Distribution of CGP Projects (Phase-II)

C. MIS: Database Management

A *database management system* (DBMS) is a kind of software that allows the efficient use and management of databases, including ensuring that data is consistent and correct and facilitating its updating. KGF has established a Data Base Management (DBM) for 54 CGP project under implementation and organized different types of data available for the users. An example of data base for the project: ***“Impact of rice - wheat/potato (-) mungbean cropping system on farmers employment opportunity, food security and livelihood in Selected monga prone areas in northern districts of Bangladesh” are shown in annex-vi.***

VI Governance, Procurement and Finance:

A. Governance

KGF operates under general guidance and supervision of the Board of Directors and General Body of the Foundation. During the reporting period board had held 5 meetings reviewing project proposals, reviewers’ reports and approving projects and providing necessary guidelines for effective implementation of the CGP projects and operation of KGF. Some of the Board members were kind enough to remain present during the Review Meetings and Workshops organized for the CGP implementation.

For effective operation and management of the Foundation and its program of activities including CGP, one draft manual on Personnel Management and one on Finance Management have been prepared. The draft manuals are now being under expert review.

THE GENERAL BODY: (According to Articles of Association)

- § There shall be a General body of the Foundation and it shall be composed of all members of the Foundation.
- § The General Body shall;
 - a. Recommend overall policy guidance and direction for the efficient functioning of the Foundation;
 - b. Approve the annual budget and supplementary budgets;
 - c. Approve balance sheet and audited accounts for the previous year;
 - d. Approve the annual report ; and
 - e. Delegate such powers and functions to other authorities of the Foundation as it may consider necessary and proper.
- § The Chairman of the Foundation may invite any person other than a member to attend a meeting of the General Body.
- § The Executive Director of the foundation will serve as Member-Secretary of the General Body.

BOARD OF DIRECTORS:

- § The Board of Directors shall be elected by the General Body in the Annual General Meeting from amongst the members of the General Body of the Foundation.

The Board of Directors shall comprise the following seven members:

- § Government nominee in the General Body;

- § Two Directors from NARS representatives (at least one from the members not in the service of the Republic) in the General Body;
- § Four members representing NGO, Foundations/Financial Institutions and or Economist/Rural Development practitioners, Agribusiness entrepreneurs, Private sectors or Individuals.
- § Directors shall serve in their capacity for a three-year term and may be permitted to serve for a maximum two consecutive terms.
- § Notwithstanding anything contained herein, the first transitory Board of Directors of the Foundation is to be nominated by the Governing Body of BARC and shall comprise the following seven persons:
 - Chairman –Executive Chairman, BARC- Ex-Officio;
 - Six members from eminent persons who may not be in the service of the Republic having high intellectual capabilities and proven record of contributions to agriculture and rural development and associated with Government agency, reputed NGOs, Foundations/Financial Institutions, and or Economist/Rural Development Practitioners, agribusiness entrepreneurs or private sectors or individuals and where applicable, be deemed to be elected and /or appointed as the case may be, in accordance with the provisions contained in the Articles of Association, and the persons named as the first transitory Board of Directors shall hold office until the second Annual General Meeting, when the entire first transitory Board of Directors shall retire within one year from the date of incorporation of the Foundation. And in their place the General Body shall elect new Board of Directors comprising seven persons from amongst themselves in accordance with the provisions of the Articles of Association and shall continue with their appointment/office for a period of three years ending with the immediate next Annual General Meeting thereafter.
- § The Board of Directors, subject to the general control and supervision of the General Body, shall pursue the objectives of the Foundation as set forth in the Memorandum of Association and shall manage the affairs, in accordance with the Articles of Association and the Rules and By –laws made hereunder and shall exercise full management and financial control of the Foundation. For the purpose of the Act, the Board of Directors shall be deemed to be the Directors of the Company.
- § The Directors shall serve in their capacity for a three-year term and may be permitted to serve for two consecutive terms.
- § No action or decision by the Board of Directors shall be rendered invalid or inoperative on account of any vacancy or vacancies in the composition of the Board of Directors.
- § **Present GnB and BoDs** : Based on the principles outlined above, the composition of the present GnB and BoDs are in Annex -vii

B. Procurement:

Krishi Gobeshona Foundation (KGF) is a non profit organization. Initially, the KGF started with the appointment of Executive Director. He took the initiative to appoint experts and other man power for KGF. There is a provision for purchase of one Jeep and two microbus. But the World Bank gave permission for purchase of one Jeep in the first year. As per procedure of Govt of Bangladesh and the World Bank one Jeep, computer with accessories, Photocopier Machine, Conference/Public address system, PABX/digital Exchange, air-

conditioner, Multimedia projector, Fax, IPS and furniture were procured and installed in the financial year 2008-2009.

Five experts in various field were also recruited for smooth functioning of KGF in June 2009. As per provision of PPR 2008 and maintaining the rule of World Bank, 2 (Two) Microbus, Computer with accessories, Miscellaneous goods and equipment and services were procured in the year 2009-2010. Procurement progress made during the year 2008-2009 and 2009-2010 is given below with relevant information.

Procurement Progress for the year 2008-2009 & 2009-2010

Procurement Progress 2008-2009					
Sl. No.	Description of goods	Unit/ Qty	Expenditure	Procedure/ Method	Procurement Guideline (PPR 2008/BG)
1	2	3	4	5	6
GOODS					
1	Jeep	1(one)	(a) Price of Vehicle Tk. 28,46,000/= (b) CDST Tk. 37,00000/= (c) First Party Insurance Tk. 173000/= (d) Registration Tk. 77,000/= (e) CNG Conversion Tk. 80,000/=	Open tender method	
			TK. 68, 76,000/=		
2	Equipment		16,37,406/=		
i)	Computer Server (Dell)	01(one)			
ii)	Desktop Computer (Dell)	07(seven)			
iii)	Laptop Computer (Dell)	02(two)			
iv)	Laser Printer-1 (Samsung)	05(five)			
v)	Laser Printer-2 (Hp)	01(one)			
vi)	Color Laser Printer (Hp)	01(one)			
vii)	Dotmatrix Printer (Epson-22090)	01(one)			
viii)	Scanner (Hp)	01(one)			
ix)	UPS (Neat)	07(seven)			
x)	On line UPS ((INTARI-ST-3000cm	01(one)			
xi)	LAN Accessories	20(nodes)			
xii)	Photocopier Machine (Canon)	01(one)	99,789/=	RFQ	
xiii)	Multimedia Projector (Hitachi)	01(one)	1,48,000/=	RFQ	
xiv)	Ceiling fan (National)	01(one)	1800/=	Shopping	
xv)	Conference PA System (EDC-1011)	01(one)	2,17,777/=	Open tender method	
xvi)	PABX/Digital Exchange	01(one)	1,77,777/=	Open tender method	

Procurement Progress 2008-2009					
Sl. No.	Description of goods	Unit/ Qty	Expenditure	Procedure/ Method	Procurement Guideline (PPR 2008/BG)
1	2	3	4	5	6
xvii)	Split type wall mountainted Air Cooler (YASHICA)	10(ten)	4,79,990/=	Open tender method	
xiii)	Fax machine (Canon)	01(one)	15,000/=	Shopping	
xix	IPS (Digilog)	02(two)	94,185/=	RFQ	
3	Furniture		2,48,560/=		
i)	Table-1	03(nos)		Open tender method	
ii)	Table-2	05(nos)			
iii)	Chair-1	03(nos)			
iv)	Chair-2	05(nos)			
v)	Visitor Chair	16(nos)			
vi)	Computer Table	07(nos)			
vii)	Steel File Cabinet	03(nos)			
viii)	Steel Almirah	01(nos)			
ix)	Visitor Chair	10(nos)			
x)	Conference Table	01(nos)			
xi)	Armless Chair for Conference Table	20(nos)			
xii)	Chair for staff	02(nos)			
SERVICES					
Experts					
1	Executive Director	36 mm		IC	
2	Director (P& E)	36 mm		IC	
3	Director (Finance)	36 mm		IC	
4	Sr. Program Officer (RM)	36 mm		IC	
5	Program Officer (RM)	36 mm		IC	
6	Administrative Officer	36 mm		IC	

Procurement Progress 2009-2010							
Sl. No	Description of goods	Unit/Qty	Expenditure	Procedure/ Method	Procurement Guideline (PPR 2008/BG)		
1	2	3	4	5	6		
GOODS							
1	Microbus	2(two) nos	Unit Price- Tk. 15,15,500/= CDST-Tk. 5,93, 500/= Registration Cost- Tk. 57,000/= 1 st Party Insurance- Tk. 68,700/= Stainless Steel Guard- Tk. 9000/= <u>CNG Conversion Cost-Tk. 70,000/=</u> Unit Tk. (23,13,700/=X 2)= 46,27,400/=	Open tender method			
Equipment							
2	Computer with Accessories						
	a. Desktop Computer b. Printer c. UPS d. Voltage Stabilizer	3(three) 3(three) 3(three) 3(three)	2,85,300/=	Open tender method			
3	40 inch Full HD BRAVIA	02 (Two)	8,52,500/=	Open tender method			
4	DVD Player	01 (One)					
5	Refrigerator	01 (One)					
6	Micro-oven	01 (One)					
7	Paper Shredder	01 (One)					
8	Paper Cutter-Machine	01 (One)					
9	Spiral Binder	01 (One)					
10	Vacuum Cleaner	01 (One)					
11	Lamination Machine	01 (One)					
12	Electronic Dictionary	01 (One)					
13	Digital Cordless Phone	01 (One)					
14	Water Filter/Purifier with hot and cold.	01 (One)					
15	Digital Video Camera Recorder	01(One)			69,500/=	RFQ	
Furniture					1,70,000/=	RFQ	
i)	Chief Table with side Table	1 (one)					
ii)	Multipurpose Self (Small)	2 (two)					
iii)	Multipurpose Self cum Almirah	2 (two)					
iv)	Computer-cum-side Table	2 (two)					
v)	Computer-cum-side Table	1 (one)					
vi)	Multipurpose Self (Medium)	2 (two)					
vii)	Steel Almirah	1(one)					
viii)	Steel File Cabinet (Four Drawer)	2 (two)					

Procurement Progress 2009-2010

Sl. No	Description of goods	Unit/Qty	Expenditure	Procedure/ Method	Procurement Guideline (PPR 2008/BG)
1	2	3	4	5	6
ix)	Steel Four Drawer Unit (With locker)	1 (one)			
x)	Chief Executive Chair	1 (one)			
xi)	Executive Chair	3(three)			
SERVICES					
Experts					
1	Director (RM)	36 mm		IC	
2	Sr. Program Officer (P &E)	36 mm		IC	
3	Accounts Officer	36 mm		IC	
Other:					
4	*Hiring of Vehicle	Need based		Open tender method	

B. Financial Progress:

- ✓ Financial Progress of KGF unit under NATP Phase-1 for financial year 2008-2009 was 71%. Total Revised DPP Cost Allocation, Revised Annual Development Programme (RADP) and Expenditure of KGF Unit were 7991.00 lakh, 400.00 lakh and 286.37 lakh respectively. This is the first Budget & Expenditure of KGF. Item wise details progress is shown below:

(Taka in Lakh)				
Total RDPP Cost Allocation (PA+GoB)			Financial Year: 2008-2009	
Sl. No.	Line Items	Total RDPP Cost Allocation (PA+GoB)	Total RADP Allocation (PA+GoB) 2008-2009	Expenditure (July to June) 2008-2009
01.	Revenue Component			
A.	National Core Contractual Experts (9 prs. 450mm)	540.00	35.00	15.08
	Operating cost & support service (8 nos.)	681.00	48.00	31.14
	Training/ Workshop/Meeting etc.	202.00	16.00	9.07
	Program cost of CGP (Competitive Grants Program)	5,113.00	125.00	124.19
	Matching fund for revenue (GoB)	28.00	3.00	2.33
	Sub-total Revenue	6,564.00	227.00	181.81
B.	Capital Component			
	Vehicle: Microbus -2 nos.	80.00	40.00	34.53
	Computer(3 nos.), & Office equipment	18.00	15.00	15.00
	Office Equipment	7.00	5.00	3.72
	Misc. equipment & Material	60.00	22.00	9.78
	Furniture	5.00	4.00	2.49
	CGP Equipment	1,161.00	40.00	0.29
	Matching fund for Capital items (GoB)	16.00	7.00	1.75
	CD VAT & other Taxes	80.00	40.00	37.00
	Sub total Capital	1,427.00	173.00	104.56
	Grand Total	7,991.00	400.00	286.37
			Progress against RADP	71%

Financial Progress of KGF unit under NATP Phase-1 for financial year 2009-2010 was 64%. The Annual Development Programme (ADP), Revised Annual Development Programme (RADP) and Expenditure of KGF Unit were 1465.00 lakh, 1067.00 lakh and 686.95 lakh respectively. The 2nd call for CGP research could not be made due to longer time taken in the research priority setting process. This has mainly caused an unspent balance of 261.68 lakh under CGP. Economic Code wise details progress is shown below:

Progress of KGF Unit under NATP Phase-1 for the Financial Year 2009-2010										
Code No.	Item of Expenditure	ADP Allocation			RADP Allocation			(in lakh Taka) Expenditure		
		RPA	GOB	Total Taka	RPA	GOB	Total Taka	RPA	GOB	Total Taka
A. Revenue Component										
4500	Salary of officers	-		-	-	-	-	-	-	-
4600	Pay of establishment	15.52	0.48	16.00	11.51	0.36	11.87	11.45	0.35	11.80
4700	Allowances	9.70	0.30	10.00	7.18	0.22	7.40	2.09	0.05	2.14
4800	Supply & services	248.17	3.83	252.00	259.76	3.97	263.73	167.17	4.10	171.27
	CGP Programme *1	958.00		958.00	625.00	-	625.00	436.64		436.64
4900	Repair and maintenance	19.61	0.39	20.00	14.55	0.45	15.00	4.87	0.14	5.01
Sub Total A:		1,251.00	5.00	1,256.00	918.00	5.00	923.00	622.22	4.64	626.86
B. Capital Component										
6800	Asset acquisition	59.00	10.00	69.00	52.00	5.00	57.00	46.85	1.43	48.28
	CGP- Equipment	100.00	-	100.00	75.00		75.00	1.68		1.68
7900	CD VAT	-	40.00	40.00		12.00	12.00		10.13	10.13
7980-7998	Capital Lump & others			-			-			-
Sub-Total B:		159.00	50.00	209.00	127.00	17.00	144.00	48.53	11.56	60.09
Grant Total:(A+B)		1,410.00	55.00	1,465.00	1,045.00	22.00	1,067.00	670.75	16.20	686.95
Progress against RADP										64%

VII Key Lessons Learned

Implementation and management of the Competitive Grants Program (CGP) is the main task of the Krishi Gobeshona Foundation (KGF). Thirty sub-projects under CGP Phase-I started implementation from May, 2009 upon signing of the MOU between KGF and the authorized persons of the implementing organizations. By now, these sub-projects have completed one year of their implementation phase. Subsequently 24 sub-projects have also started implementation from Nov/10 as CGP Phase-II During this period of one year, KGF professionals have identified some pertinent and basic weaknesses which need to be corrected for successful implementation of and to get desired outputs from CGP Sub-projects in future. The lessons learned from some key aspects related to CGP implementation are given below:

1. **Priority Setting:** BARC led priority setting exercise in 2008 and identified some thematic areas which are too broad and non-focused. As a result, many of the proposals could not be properly prepared to address the real field problems. Again, thematic areas were not properly identified for CGP research and thus some sub-projects are less likely to deliver needed outputs as expected from CGP sub-projects. To our judgment, it is the researchable problems/issues under the thematic areas but not the thematic areas are to be prioritized for focused research agenda. Now priority setting process by BARC in collaboration with KGF is in progress since November, 2009

under new directions. Immediately after this exercise, KGF professionals will select appropriate priority researchable issues under the thematic areas in line with CGP concept and objectives for invitation of research proposal.

2. **Quality of Research Proposals:** Research proposal writings in the form of Concept Notes or Full Proposals are, in general, weak. Project title, problem statements, specific objectives, planned activities and expected outputs are not clearly stated and not linked to each other. These suggest that skill development of the researchers in proposal as well as report writings through training program is essential.
3. **Review of the Research Proposals:** It seems that some of the research proposals were not critically reviewed although relevant and qualified expert reviewers were engaged for that purpose. Proposed budget was not rationalized with the volume of works. Perhaps those reviewers were not serious and did not give enough time for reviewing the proposals. Again KGF could not do any mentoring in the review process due to lack of professionals at that time. These suggest that concerted efforts must be made by KGF professionals for mentoring at different stages of the review process along with orientation of the reviewers.
4. **Sub project number and duration:** According to PAD, more number of small sub-projects (54) with less duration (maximum of 2 years) are less likely to generate sustainable technologies for creation of an impact in the farming community. Less number of relatively bigger project with three (3) year duration involving more location and partners needs to be considered for CGP funding in future to create a visible impact in the society
5. **Operational Manual:** Guidelines and formats provided in the previous Operational Manual (OM) were not clear and complete in many aspects. A revised version of the OM with clear and complete guidelines and formats should be made available for future use. KGF professionals have already prepared a revised version of the OM and submitted to BARC, PCU of NATP, World Bank and Board members of KGF for their endorsement.

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Monitoring Format

[Monitoring is the systematic collections and analysis of information as project progresses in order to ensure that the planned activities are being implemented as per schedule and also to make midcourse adjustment /correction, if needed. This monitoring needs to be done time to time mainly by KGF professionals with the use of desk and field monitoring formats given below.]

A. Desk Monitoring: (Review of different types of progress reports is the basis for such monitoring)

Project ID No-(CN/FRP):

Project Title:

Type of Progress Report Reviewed: (Implementation /Half yearly/ Annual), received on -----

Monitoring Date:

Please put √ mark on the appropriate box.

1. Whether the activities performed are consistent with the planned activities as per project? Yes No

If No, please specify the point(s) where lacking/discrepancies exist:

2. Whether the outputs/results are clearly stated in the report to achieve the objectives? Yes No

a. If Yes, make an analytical statement on how the given outputs/results will lead to achieve specific objective(s):

b. If No, please indicate area/areas which need further improvement:

3. Whether the expenditures incurred are justifiable with activities performed and output achieved? Yes No

If No, please specify the point(s) where lacking/discrepancies exist:

Name and signature of the Monitoring Officer(s)

B. Field Monitoring: (Office/ site visit, discussion with relevant persons and examination of relevant records are the basis of such monitoring)

Project ID No-(CN/FRP):

Project Title:

Monitoring Date:

Location/s Visited:

Person/s met:

1. Whether the records on physical, technical and financial aspects of the project are maintained properly? Yes/No. If no, please specify the lacking:
2. A brief account of the physical and financial progress of the project for the period from-----to-----

3. Technical progress

Sl.No	Activities planned for the period (from-----to-----)	Brief statement on the progress of planned activities performed during the period (from-----to-----)

4. Please state clearly how the progress made so far lead to achieve specific objective (s):
5. Observations, comments, suggestions etc:
6. Constraints, if any

Name and signature of the Monitoring Officer.

Sample Monitoring Report on a CGP Phase-1 Project

Project Title: Increasing storability of Potato in natural storage and income generation through small scale processing of Potato

Project Code No: C-PHT-179

Required information on above project was collected by using the monitoring format (desk & field)

Summary Report:

The above titled project completed about 9 months out of its total life of 24 months from the date of commencement up to the date of field visit on March 08, 2010. In the mean time, KGF received half yearly progress report of this project in January, 2010. Information provided in the half yearly progress report and information collected during the field visit is the basis for preparation of this project monitoring report.

Principal Investigator (PI) of this project completed most of the initial activities as per plan. These are setting up of on-station studies, selection of 2 sites outside the research centre for potato storability and loss studies and selection of 80 farm families for home scale potato processing studies. Base line survey on these 80 farm families has also been completed but its analysis is yet to be done. Recruitment of one Research Assistant on contractual basis following BARI rules has been done but about 8 months late than planned. One poly sealer was procured as per plan but only 10 potato slicers out of planned 50 were procured and distributed among the female members for potato processing.

As per plan, booklets/leaflets on home scale potato processing and potato preservation under modified natural storage condition were prepared and distributed by PI among the potato farmers, particularly the beneficiary farm families. Training of 80 female members on potato preservation and processing were imparted in two batches. Six on-station experiments with variable treatments affecting post harvest loss and storability have been completed.

Harvested potatoes are being stored in a modified natural storage facility developed in the centre to compare with the traditional natural storage. Preparation for storing of potatoes in two other on-farm locations is in progress.

Cash book, stock register, bill vouchers and data record note book are being maintained by PI following BARI standard procedures.

Project activities performed so far do not vary much than those of the planned activities. Availability and adequacy of fund for PI is very favorable for smooth implementation of the project.

Comments/Suggestions:

1 Project specific objectives (7) are many and do not have any target(s). Some of these are not pertinent and not achievable within project life. Project PI is suggested to integrate these 7 objectives in to a maximum of 3-4 with clear cut target(s).

2. Plan of activities given in PP is not clear and not adequate. PI is suggested to make a detailed plan of activities with individual task against each specific objective so that outputs/results obtained can be linked with that objective. This will serve as a basis of a Result Frame Work Approach for the project.

3. The project appears to be in the right track.

Name and Signature of
Monitoring Officer
Date:

Annex-III

List of Workshop/ Seminar/ Training/ Meetings of KGF:

Sl. No	Name of Training/ Workshop/ Meeting	Date, Duration and Venue held	Objectives for holding Training/ Workshop/ Meeting	Target Participants with no.	Output Achieved with likely Outcomes
1.	Review Workshop on Competitive Grants Programme (CGP)	29 March to 02 April, 2009 BARC Training Room 1	Presentation of short listed project proposals of CGP	70 participants (PIs, Scientists of NARS, BAU, SAU, KU, BSMRAU, NGOs, Extension providers, Evaluators etc.)	Selected 66 research proposals for implementation
2.	Training Workshop on Procurement	09 to 11 June, 2009 BARC Conference Room 1	To make aware on the procurement procedures based on PP Acts, 2006 and PPR, 2008	40 participants (PIs of NARS, BAU, SAU, KU, BSMRAU, NGOs, Extension providers etc.)	PIs became appraised on procurement rules on the basis of PP Acts 2006 and PPR 2008
3.	Training Workshop on Financial Management	12 to 14 June, 2009 BARC Conference Room 1	To make better understanding on financial rules and regulation of KGF	41 participants (PIs of NARS, BAU, SAU, KU, BSMRAU, NGOs, PIUs of NATP, Extension providers)	PIs became appraised on the financial management of KGF funds
4.	Workshop on CGP project implementation Plan	27 July, 2009 BARC Conference Room 1	To discuss implementation plan of the CGP Phase-I projects and to make uniformity of the inception reports in specified format	79 participants (PIs of the projects, Scientists of NARS, BAU, SAU, KU, BSMRAU, NGOs, Extension providers etc.)	Refined implementation plan of CGP Phase-I projects as per objective of the projects
6.	Consultation meeting	04 October, 2009. KGF Meeting Room	Mentoring the research proposal and activities based on objectives of the projects	12 participants (PIs of the project Code no. F-SE-257 and F-DD-240 and KGF Experts)	Reviewed, refined and recast progress of the research under implementation
7.	Consultation meeting	13 October, 2009. KGF Meeting Room	Mentoring the research proposal and activities based on objectives of the projects	16 participants (PIs of the project Code no. L-HM-214, L-HM-219. C-HV-202, SE-MS-287, F-SE-290, F-SE-291 and L-DD-232 and KGF Experts)	Reviewed, refined and recast progress of the research under implementation
8.	Consultation Workshop on Competitive Grants Programme	24 October, 2009. BARC Training Room	Review the project proposals and recast the objectives and expected outcome of the projects of CGP Phase-II	31 participants (PIs, Scientists of NARS, BAU, SAU, KU, BSMRAU)	Reviewed, refined and recast project implementation plan of the research under implementation
10.	Regional Workshop on Agricultural research Priority Setting	29 December, 2009. RDA, Bogra	Selecting researchable areas under agro-ecological zones	96 participants (DAE, DOF, DLS, NARS, NGOs, Universities, RDA, NATP units, BADC, WDB, Farmers)	Selected researchable priority areas of agricultural research areas of 16 northern region of Bangladesh
11.	Coordination meeting for CGP Phase-I projects	07 January, 2010. BARC Conference Room 1	Review Half Yearly reports of the CGP Phase-I projects under implementation and to make uniformity of the reports in specified formats	42 participants (PIs, Scientists of NARS, BAU, SAU, KU, BSMRAU, BARC)	Reviewed Half Yearly progress of 30 projects under implementation

Sl. No	Name of Training/ Workshop/ Meeting	Date, Duration and Venue held	Objectives for holding Training/ Workshop/ Meeting	Target Participants with no.	Output Achieved with likely Outcomes
12.	Regional Workshop on Agricultural research Priority Setting	11 January, 2010. Regional PATC, Chittagong	Selecting researchable areas under agro-ecological zones	120 participants (DAE, DOF, DLS, NARS, NGOs, Universities, RDA, NATP units, BADC, WDB, Farmers)	Selected researchable priority areas of agricultural research areas of 15 eastern and north eastern region of Bangladesh
13.	Consultation meeting	23 February, 2010. BRRI Conference Room, BRRI, Gazipur	Review and mentoring the research proposal and activities based on objectives of the projects	10 participants (PIs of the project Code no. C-S-150, and C-VI-025, IRRI Representative, BRRI and KGF Experts)	Refined implantation plan of CGP Phase-I and II projects as per objective of the projects of BRRI
14.	The Appraisal of the KGF and CGP research	02 March, 2010. BARC Conference Room 1	To appraise the activities of KGF and to make aware of CGP research under implementation in Phase-I and Phase-II to policy makers, extension providers and researchers	71 participants (MoA, BARC, BARI, BRRI, PIUs of NATP, MD Hortex, WB, NARS, Higher Gov. officials)	Appraised the objective and activities of KGF to policy makers, planners and stakeholders
15.	Consultation meeting	11 March, 2010. BAURES Conference Room, BAU, Mymensingh	Review and mentoring the research proposal and activities based on objectives of the projects	25 participants (PIs of the project CGP phase-I and Phase-II projects under BAURES and KGF Experts)	Reviewed Half Yearly progress of 21 projects under implementation
16.	Consultation meeting	13 March, 2010. BARI Seminar Room, BARI, Gazipur	Review and mentoring the research proposal and activities based on objectives of the projects	27 participants (PIs of the project CGP phase-I and Phase-II projects under BARI and KGF Experts)	Reviewed, refined and recast progress of the research under implementation
17.	Training Workshop on Financial and Procurement Management for CGP Phase-II Projects	21 April, 2010. BARC Conference Room 2	To appraise the rules and regulations of spending of KGF fund and to make aware of the rules of procurement under CGP	52 participants (PIs and Accounts Officer of the CGP Phase-II projects under implementation BARC, PIU of the NATP)	PIs became appraised on procurement rules and financial management of KGF funds on the basis of PP Acts 2006 and PPR 2008
18.	Coordination Meeting for CGP Phase-II Projects	22 April, 2010. BARC Training Room	Review the Half Yearly progress of the CGP phase-II Projects under implementation and to make uniformity of the Half Yearly Reports in specified format	45 participants (PIs, Scientists of NARS, BAU, SAU, KU, BSMRAU, BARC, PIU of NATP)	Reviewed the Half Yearly progress of the CGP phase-II Projects under implementation
19.	Terminal/ Annual Review Workshop on CGP Phase-I projects	24-26 May, 2010. AIS Conference Room	Review the Terminal/ Annual progress of the CGP phase-I Projects under implementation	56 participants (PIs, Scientists of NARS, BAU, SAU, KU, BSMRAU, BARC, PIU of NATP, DAE, AIS)	Reviewed Annual/ Terminal reports of 27 research projects of CGP Phase-II

Annex-IV

List of CGP Funded Projects under Implementation (Phase-I)

Serial No.	Code and Title of the project	Name of PI and Address
	CGP phase-I	
1.	C-CC-129: Assessing the long term impacts of climatic vulnerabilities on crop production and evaluation of adaptation practices in the vulnerable areas of Bangladesh	Dr. Moslem Uddin Miah, Senior Agriculture Specialist, Bangladesh Centre for advanced studies. House-10, Road-16/A, Gulshan-1, Dhaka-1212, 01711591066
2.	C-CA- 117: Adaptation of suitable crops in saline soils of Noakhali	Dr. Mohammad Amin, Principal Scientific Officer, OFRD, Bangladesh Agricultural Research Institute, Majidi Bazar, Noakhali, 01819803229
3.	F-DD-240: GIS and Remote Sensing database for Spatial decision support system for sustainable shrimp culture in South-West coastal region of Bangladesh	Dr. S.M. Bazlur Rahman, Associate Professor, , Fisheries and Marine Resource Technology Discipline, Khulna University, Khulna- 9208, 01914325048
4.	Molecular characterization of poultry salmonellae and production of fomalin killed pullorum disease vaccine using local isolate in Bangladesh	Dr. Makbul Hossain, Deptt. of Pathology, Bangladesh Agricultural University, Mymensingh-2202, 01715154694
5.	C-FM- 163: Development of small scale electric powered oil expeller suitable for adaptation among the rural farmers' in Bangladesh	Prof. Dr. Md. Daulat Husain, Department of Farm Power and Machinery, Bangladesh Agricultural University, Mymensingh-2202, 01716411105
6.	C-FPE- 049: Wider adaptation of modern rapeseed, mustard and Sesame varieties with production technology for yield gap reduction	Dr. Md. Ali Akbar, Executive Director, Agrarian Research, Foundation, House-48, Road-5, Pisciculture Housing Society, Dhaka-1207, 01731628722
7.	C-FPE- 054: Up - Scaling of integrated rice - duck farming in Bangladesh: Improvement of rural livelihood through community approach	Dr. Sk. Tanveer Hossain, Maneger, , Padakhep Manabik Unnayan Kendra, House-548, Road-10, Baitul Aman Housing Society, Adabar, Dhaka-1207, 9128824 /1730026955
8.	C-FPE- 055: Impact of rice - wheat/potato mungbean cropping system on farmers employment opportunity, food security and livelihood in selected monga prone areas in northern districts of Bangladesh	Dr. M. Moynul Haque, Professor, Deptt. of Agronomy, Bangabandhu Sheikh Mujibur Rahman Agricultural University,, Salna, Gazipur-1706, 9205323/ 01711908640
9.	L-HM-214: Study of herd health management practices for Ruminants in Bangladesh	Dr. Md. Hafezur Rahman, Livestock Advisor, Social Upliftment Society (SUS), 76/A Uttarpara, Savar, Dhaka, 01715 0222 673
10.	L-HM-219: Improving Livelihood through Herd Health Management and Milk market access to poor farmers living in the northern Bangladesh	Dr. Md. Golam Shahi Alam, Professor, DSO, Faculty of Veterinary Science, Bangladesh Agricultural University, Mymensingh-2202, 01199288630
11.	C-HV-194: Assessment of effectiveness of IPM practices for pest management in Brinjal	Kbd. Rafiqul Haider, Programme Advisor, SEDA, Rebeca Cottage, Mashkanda, Mymensingh, 01715022673
12.	C-HV-197: Standardization of production practices and technology transfer of BARI Strawberry-1	Munshi Rashid Ahmed, SSO, Pomology Division, Horticultural Research Centre, Bangladesh Agricultural Research Institute, Gazipur-1701 01552-346903
13.	C-HV-202: Data-based global market analysis for production and export potentials of high valued crops in Bangladesh	Mr. Abdur Rashid, Senior, Research Fellow, Agrarian Research Foundation, House-48, Road-5, Pisciculture Housing Society, Mohammadpur, Dhaka-1207, 01919282978
14.	C-HF-103: Validation of improved agricultural technologies at farmer's field in hill farming system	Dr. Md. Mohabbat Ullah, Principal Scientific Officer, Hill Agril. Research Station, Bangladesh Agricultural Research Institute, Khagrachhari 01550-605727
15.	C-HF-104: Ecological determinants of bamboo flowering and rodent population outbreaks in the Chittagong Hill Tracts	Dr. Nazira Q. Kamal, , AID –Comilla, Vill.- Raghupur, P.O.-Rajapara, Union-Jagannathpur, Upazilla- Comilla Sadar, Comilla. 01713018973
16.	SE-MS-C-266: Processing of indigenous fruits and vegetables to improve livelihood of rural poor in	Professor Dr. Md. Shams-Ud-Din Department of Food Technology & Rural Industries, Bangladesh Agricultural

Serial No.	Code and Title of the project	Name of PI and Address
	CGP phase-I	
	Modhupur Region	University (BAU), Mymensingh-2202, Bangladesh. 01711-933 742
17.	SE-MS- 279: Promotion of Agricultural Marketing in Hills	Md. Badrul Alam, , International Development Enterprises, House-28 (3rd floor), Road-130, Gulshan-1, Dhaka-1212, 01711591613
18.	SE-MS- 285: Capacity building of the farmers through exporting comparative advantaged horticultural products	Md. Kamruzzaman, Associate Professor, Agril. Econ. Division, Bangabandhu Sheikh Mujibur Rahman Agricultural University, Salna, Gazipur-1706, 01712650662
19.	SE-MS- 287: Linking small farmers with supermarkets through promotion of peri-urban agriculture	Md. Moksedur Rahman, Programme Officer, Social Upliftment Society, 76/A Uttar para, Savar, Dhaka-1340, 01715022673
20.	C-PHT- 175: Upscaling and adoption of hybrid dryer for quality grain seed production.	Dr. Md. Ayub Hossain, SSO, FMP, Engineering Division, Bangladesh Agricultural Research Institute, Gazipur-1701, 01716979034
21.	C-PHT-179: Increasing storability of potato in natural storage and income generation through small scale processing of potato	Dr. Md. Azizul Haque, SSO, Tuber Crops Research Sub-center, Bangladesh Agricultural Research Institute, Munshiganj-1500, 01912126302
22.	C-SPM- 092: Quality improvement of farmers stored seeds of mungbean, lentil, chickpea and its relation to diseases development in Bangladesh	Dr. A. H. M. Mahfuzul Haque, SSO, Pulse Research Sub-station, Bangladesh Agricultural Research Institute, Gazipur-1701, 01712154073
23.	C-SPM- 096: Seed production of summer onion varieties	Dr. Md. Shawkat Ali Mallik, CSO, Spices Research Centre, Bangladesh Agricultural Research Institute, Sibganj, Bogra, 01715527855
24.	F-SE- 257: Socio-Economics and livelihood development of aqua-products trader in urban and periurban areas of Khulna Metropolis	Dr. Saifuddin Shah, Vice Chancellor, Khulna University, Khulna-9208, 01711218993
25.	F-SE- 290: Factors affecting shifting from food insecurity to food security, A study of selected Monga prone areas	Dr. Ashoke Kumar Ghose, Research and Development Foundation for the Poor Silicon Arcade,, 1/1(B), Mohonpur, Adabar, Ring Road, Shyamoli, Dhaka-1207, 01711189398
26.	F-SE- 291: Assessment of techno-Socioeconomic Resources and development of strategies for Promoting food and economic securities of Ethnic communities in Bangladesh	Dr. Md. Abiar Rahman, Asstt. Professor, Deptt. of Agroforestry and Environment, Bangabandhu Sheikh Mujibur Rahman Agricultural University, Salna, Gazipur-1706, 01552495452
27.	C-S- 132: Agricultural land loss and food security: An Assessment.	Dr. Md. Abul Quashem, Bangladesh Unnayan Parishad, , House-50, Road-8, Block-D, Niketon Gulshan-1, Dhaka-1212, 01715006916
28.	C-S-144: Maximizing yield of tea in some selected problematic Acidic soils through improved management practices	Dr. Quamrul Ahsan, Senior Research Associate, CASEED, House-59, Road-12/A, Dhanmondi, Dhaka-1209, 9134192/ 01715199264
29.	C-VI- 006: Collection, Conservation characterizations and varietal development of Garlic and Onion through selection and molecular techniques	Dr. M. A. Rahim, Professor, Deptt. of Horticulture, Bangladesh Agricultural University, Mymensingh-2202, 01711854471
30.	C-VI- 025: Rice germplasm collection and conservation from hilly, coastal, haor and other areas of Bangladesh	Dr. Md. Khairul Basher, CSO & Head, Genetic Resource and Seed Division, BRRI, Gazipur-1701, 01711283982

Annex-V

List of CGP Funded Projects under Implementation (Phase-II)

Serial No.	Code and Title of the project	Name of PI and Address
	CGP phase-II	
1.	C-CA- 109: Development of appropriate irrigation and water management technologies for increasing and sustaining crop production in the saline coastal area of Bangladesh	Dr. Md. Hossain Ali, Senior Scientific Officer, Agricultural Engineering Division, BINA, P.O. BOX-04, Mymensingh-2200, 01818486534.
2.	C-CA- 113: Adaptation of improved Sesame varieties in Khulna District optimizing sowing time and Nitrogenous fertilizer management	Dr. Md. Sarwar Jahan, Professor, Agrotechnology Discipline, Khulna University, Khulna-9208, 01712813106
3.	C-CA- 116: Improvement of cropping system through introduction of pulse and spice crops during the fallow period in Khulna area	Dr. Md. Sirajul Islam, Principal Scientific Officer, OFRD, Regional Agricultural Research Station, BARI, Jessore, 041774659
4.	C-FM- 173: Design and development of power tiller for dry and wet crop land cultivation in Bangladesh	Mr. Md. Abdus Satter, Principal Investigator of the project and senior research fellow, CASEED, House-59, Road-12/A, Dhanmondi, Dhaka-1209, 01712082656
5.	C-FPE- 033: Evaluation of herbicide use in Bangladesh agriculture with special reference to wetland	Mr. Md. Nasimul Bari, Associate Professor, Department of Agronomy, Bangabandhu Sheikh Mujibur Rahman Agricultural University, Gazipur-1706, 9205323, 01552356277
6.	C-FPE- 051: Validation and Up-scaling of Improved Varieties of Mungbean, Blackgram, Groundnut and Sweet Potato in the Char Areas of Jamalpur and Sherpur Districts	Dr. Mrityunjoy Biswas, Senior Scientific Officer, BARI Regional Agricultural Research Station, Jamalpur-2000, Jamalpur 01711240580
7.	C-FPE- 052: Productivity Improvement of Acid Soil by Using Dolochun in Northern Bangladesh	Dr. M. Moznur Rahman, Director (Research), BARI, Gazipur-170, 01716472219
8.	C-FPE- 063: Determination of factors responsible for yield Gaps in rice and wheat at farmer's field	Dr. M Abul Kashem, Professor, Department of Agricultural Extension Education, Bangladesh Agricultural University, Mymensingh-2202, 01711957558
9.	L-LM- 227: Integrated rice/forage production and storage technology increase milk yield of diary cows pf smallholder rural farmers	Dr. M. Ali Akbar, Professor, Department of Animal Nutrition, Bangladesh Agricultural University, Mymensingh, 01711592145
10.	L-LM- 235: Identifying high risk areas for introduction of Avian Influenza via cross border routes through poultry trading	Dr. M. Harun- Ar-Rashid, Department of Agricultural Economics, BAU, Mymensingh-2202, 01925165211
11.	L-FF-231: Development of low cost milk replacer with locally available feed ingredients for rearing calves	Dr. Md. Nurul Islam, Department of Dairy Science, BAU, Mymensingh-2202, 01712621079
12.	C-PHT- 186: Small-Scale processing of functional fruits Juices applying enzyme technology	Prof. Dr. M Burhan uddin, Department of Food Technology and Rural Industries, BAU, Mymensingh2202, 01711110509
14.	SE-PP- 264: Impact analysis of spices research and extension in Bangladesh	Dr. M. Serajul Islam, Professor, Department of Agricultural Economics, BAU, Mymensingh, 01715028792

Serial No.	Code and Title of the project	Name of PI and Address
	CGP phase-II	
13.	SE-PP- 262: Employment generation and food accessibility in the Monga regions: An analysis of existing and improved technologies	Dr. M. Mazharul Anwar, SSO, Agricultural Research Station, BARI, Burirhat, Rangpur, 01720660167
15.	C-SPM-086: Adoption of modern production practices in cereal crops for quality seed production and seed security at farmers level	Dr. Md. Shahjahan, Managing Director, Grameen Krishi Foundation Office, College Road, Alamnagar, Rangpur, 01712164991
16.	C-PHT- 177: Reduction of post-harvest losses of selected horticultural crops through improved handling and packaging	Dr. M. Abdul Baqui, Visiting Professor, Department of Bangabandhu Sheikh Mujibur Rahman Agricultural University, Gazipur-1706, 01713881104
17.	C-S- 135: On-Farm soil fertility management through IPNS approach	Mr. Dilwar Ahmed Chowdhury, Senior Scientific Officer, On-Farm Research Division, BARI, Joydebpur, Gazipur-1701, 01711318685
18.	C-S- 149: Acid soil amendment through liming for improving livelihood of farmers	Mr. Md. Bodruzzaman, Senior Scientific Officer,, Wheat Research Centre, Nashipur, Dinajpur, 01712600518
19.	C-S- 150: Validation refinement and dissemination of water management technologies for increasing water use efficiency and rice production	Dr. Md. Nazmul Hassan, SSO, Irrigation Water Management Division, BRRI, Gazipur, 01711431370
20.	C-S- 156: Effects of Household wastes on vegetable production in monga area of Bangladesh	Dr. G.K.M. Mustafizur Rahman, Professor, Department of soil science, Bangabandhu Sheikh Mujibur Rahman Agricultural University, Gazipur-1706, 01718186642
21.	C-S- 161: Water management practices for increasing cropping intensity in Chapai Nawabganj district of Bangladesh	Dr. Md. Asgar Ali Sarkar, CSO (cc), Agriculture Engineering Division, BINA, P.O. BOX-04, Mymensingh-2202, 01715998145
22.	C-VI- 010: Validation and dissemination of new varieties and advanced lines for increasing the productivity of lentil, chickpea, mungbean and blackgram in the northern region of Bangladesh	Dr. Md. Jalal Uddin, Chief Scientific Officer, Pulses Research Centre, Regional Agricultural Research Station, BARI, Ishurdi, Pabna-6620, 01720620621
23.	C-VI- 015: Collection and conservation of indigenous vegetable germplasm	Dr. Md. Mamtazul Hoque, Project Director, Plant Genetic Resources Centre, BARI, Gazipur-1701, 01713002190

Sample Database on CGP Project**KRISHI GOBESHONA FOUNDATION**

Competitive Grants Programme NATP-KGF Unit

Code no : C-FPE- 055

Title of Project: **Impact of rice - wheat/potato mungbean cropping system on farmers employment opportunity, food security and livelihood in selected munga prone areas in northern districts of Bangladesh****PI and Address:** Dr. M. Moynul Haque, Professor, Department of Agronomy, Bangabandhu Sheikh Mujibur Rahman Agricultural University, Gazipur-1706, 9205323**Head of Organization:** Registrar, Bangabandhu Sheikh Mujibur Rahman Agricultural University, Gazipur-1706**Project Location/s:** Rangpur, Kurigramme, Nilphamari, Lalmonirhat, Gaibandh

Project Duration	From	To	Contract Signed date	Total Cost in Taka
24 (Months)	14/05/2009	13/05/2011	14 May, 2009	2000000

Broad Objective(s): Developing and adoption of improved cropping systems to mitigate munga**Specific Objective(s):**

- To determine the present status of socio-economic conditions, livelihood strategies of munga affected small farmers
- To evaluate farmers follow in the munga affected districts of Greater Rangpur
- To evaluate the productivity, profitability and employment opportunity of incorporating early matured HYV of rice (BRRIdhan 33 or BUdhan 1) and high yielding mungbean (cv. BUMug 4 or BARImung 6) in rice-wheat/potato-mungbean cropping system
- To recommend improving cropping systems through incorporation of legumes and high value rice and production

Environmental Implications:

- If successfully implemented, the project will have positive impact on the environment by reducing chemical fertilizer demand and improving soil health while increasing yield and farm economy. The project is environmental friendly because of inclusion of mungbean in cropping system research. Incorporation of mungbean will reduce chemical fertilizer demand of other cereals of the cropping system and will improve soil health and productivity of whole cropping system

Expected Output:

- Adoption of new rice and mungbean varieties in Munga prone area
- Increasing cropping intensity and thereby enhancing food production and food security in ultra-poor area
- Job creation in Munga period
- Improvement of livelihood in selected areas of Rangpur region

Planned Activities

- Farmer selection
- Conducting baseline survey on farmers' socio-economic profile, cropping systems and agronomic practices, human nutrition and primary healthcare, livelihood etc
- Focal Group Discussion, Land selection, Planting mugbean,
- Mugbean harvesting and data collection,
- Rice seeding and transplanting, Sowing wheat/potato

Implementation Progress: Upto April, 2010

- Short duration Mungbean was grown in fallow lands after harvesting of potato and wheat
- Yield of mungbean was 802 kg/hect, In job crisis period 124/labour/hect were employed for mungbean production.
- Yield of short duration rice 3.87 ton/hect, yield of long duration rice 3.50 ton/hect, So long duration yield less than short duration rice. Yield of potato 19.33 MT/hect and 16.31MT after short duration rice and long duration rice respectively.
- Yield of wheat 2.37 and 2.11 MT after harvesting short and long duration rice respectively.
- Rice yield increase - 10.3%, due to adopting of short duration rice
- Potato yield increase - 18.5%, due to adopting of short duration rice
- Wheat yield increase - 12.3% over the existing farmer cropping system practices thereof for large scale adoption in the Greater Rangpur region

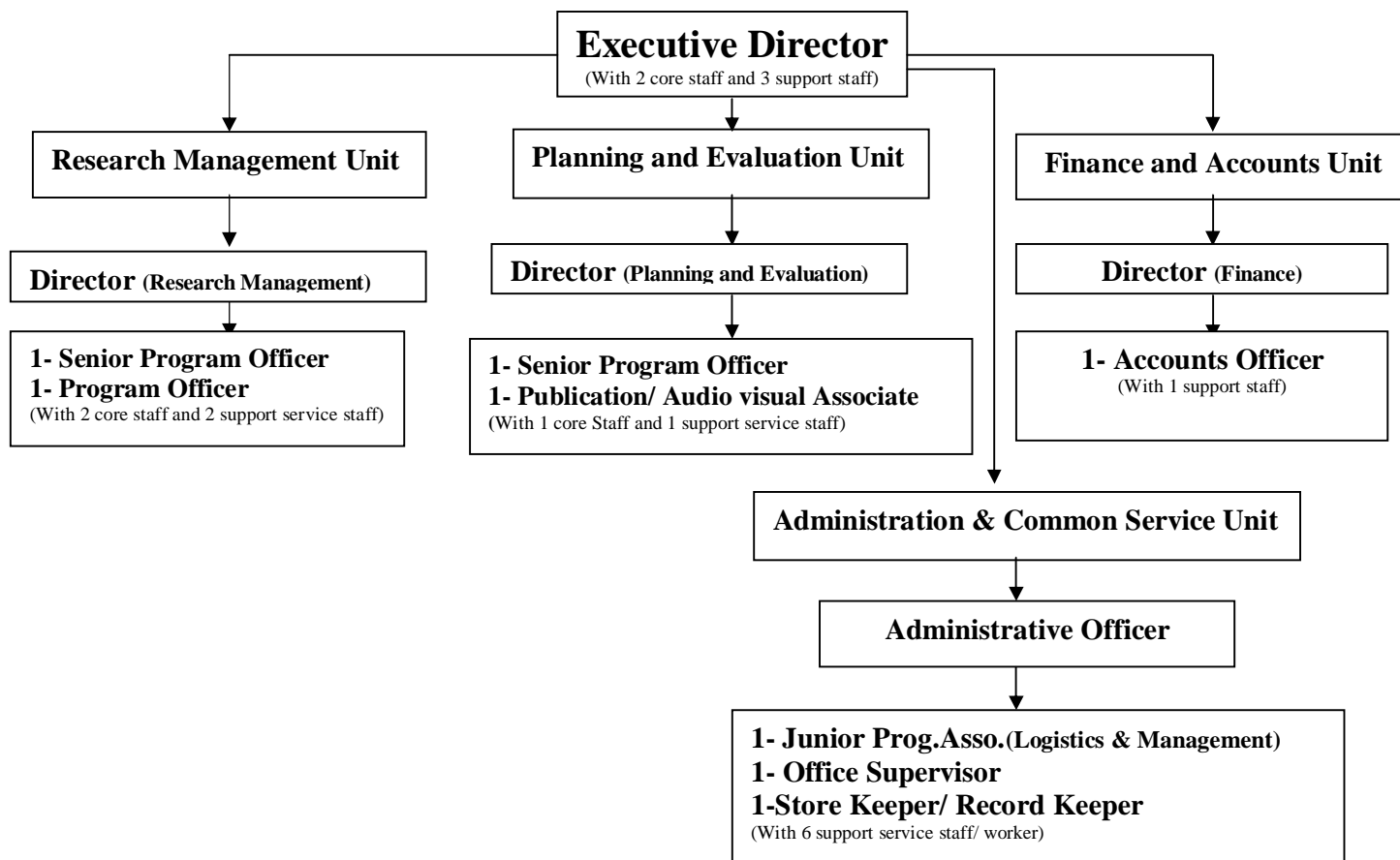
Total Budget	1st Year Budget	Fund Received (Upto 30 April, 2010)	Expenditure (as April, 2010)
2000000	1062500	956250	450000

Annex-VII

KGF General Body and Board of Directors:

Sl. No.	Name & Designation	Chairman/ Members	Nominated	Category
01.	Dr. Wais Kabir Executive Chairman BARC, Farmgate, Dhaka-1215.	Chairman	Ex-officio Member	Ex-officio
02.	Dr. S. M. Hasanuzzaman, Former Member (Agriculture), Planning Commission and Retired Director General, BRRI, 74/1 Indira Road, Farmgate, Dhaka-1215	Member	Ministry of Agriculture (MoA)	MoA
03.	Director General, DAE, Khamarbari, Farmgat, Dhaka-1215	Member	BARC Governing Body (GB)	DAE Representative
04.	Director General, BARI, Joydebpur, Gazipur.	Member	BARC Governing Body (GB)	NARS Representative
05.	Prof. Dr. Md. Hazrat Ali, Ex-Dean and Professor, Department of Agronomy, Sher-e- Bangla Agricultural University, Sher-e-Bangla Nagar, Dhaka-1207	Member	KGF General Body	Agricultural University
06.	Dr. M. Asaduzzaman, Research Director, Bangladesh Institute of Development Studies (BIDS) E-17, Agargaon, Sher-e-Bangla Nagar, Dhaka-1207	Member	KGF General Body	Economist/ Social Scientist
07.	Dr. M. A. Hamid Miah IRRI Liaison Scientist IRRI Bangladesh Office, House no.-9, Road no.-2/2, Chairmanbari Banani, Dhaka-1213.	Member	BARC Governing Body (GB)	CGIAR Representative in Bangladesh
08.	Dr. K. C. Roy, Former DG, BARI, House-247 (2nd Floor), Block -K West Joydebpur, Gazipur-1700.	Member	KGF General Body	NARS Representative
09.	Mr. Mohammad Masum, Chairman, Supreme Seed Company Ltd. Sector-3, Rabindra Sarani, Uttara, Dhaka-1230	Member	KGF General Body	Agri-business
10.	Dr. Syed Samsuzzaman, Director (Resources and Environment), RDRS Bangladesh, Jail Road, Dhap, Rangpur	Member	KGF General Body	Social Development Practitioner
11.	Prof. Dr. M. Aminul Islam, Former DG, BFRI & Professor BAU. 5/A Regent Tower, 133/1, Outer Circular Road, Mogbazar, Dhaka.	Member	BARC Governing Body (GB)	Agricultural University/ Educational Institute

KGF Organogram



KGF Chief Executive and Expert Professionals:

✚ Chief Executive: Dr. M. Nurul Alam, Executive Director, KGF

<u>Sl. No.</u>	<u>Name of the Experts & Designation (Technical and Financial)</u>
01	Dr. Nurul Islam Bhuiyan, Director (Research Management)
02.	Prof. Dr. Abdul Hamid, Director (Planning & Evaluation)
03.	Dr. Rahim Uddin Ahmed, Sr. Program Officer (Planning & Evaluation)
04.	Dr. Md. Abdur Razzaque, Sr. Program Officer (Research Management)
05.	Mr. M.A. Faiz Kutubi, Program Officer (Research Management)
06.	Mr. Mehedi Hasan, Admin Officer (In-Charge)
07.	Mr. Md. Abdul Hamid, Director (Finance)
08.	Mr. Md. Sultan Mahmud, Accounts Officer