

## **List of research projects implemented through KGF (Since inception) under NATP and BKGET funding and potential technologies generated there of**

Krishi Gobeshona Foundation (KGF) started functioning in 2007 with the funding support from NATP phase I. With the NATP funding, the Foundation awarded 93 research projects under CGP; of which 84 were successfully completed by December 2014. The rest 9 projects were terminated/withdrawn due to poor or unsatisfactory performance or for some other undesirable reasons. The foundation started awarding CGP projects under BKGET funding from 2013 and in the 1<sup>st</sup> call 14 projects were awarded, those have already been completed by June 2016. The 2<sup>nd</sup> call of BKGET funded CGP projects (19 projects) have started functioning from around March 2015 which are expected to be completed by June 2018. Out of 84 completed projects under NATP funding 20 promising technologies were taken under Technology Piloting Program (TPP) for validation in the farmers' field and further extrapolation. From the recently completed CGP projects under BKGET funding initially, 02 technologies were funded for piloting during 2016-17. With the BKGET fund, KGF awarded eight (8) Basic research projects in June 2017 that are being implemented by BARI and BRRI. To address the problems of unfavorable ecosystem covering Hill Tracts, Coastal and Haor areas, drought prone environment, Climate change impact on agriculture, etc. KGF initiated funding projects under Commissioned Research Program (CRP). Till now, a total of five (5) CRP projects are in operation with the fund from BKGET. KGF also undertakes collaborative research projects with the international organizations under International Collaborative Programs (ICP). Three such projects are there in operation under BKGET funding.

### **Competitive Grants Program (CGP) List of NATP phase I CGP Projects under 1<sup>st</sup> Call (28 projects)**

SI #	Code and Title of the project
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
2.	C-CA-117: Adaptation of suitable crops in saline soils of Noakhali
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
4.	L-DD-232: Molecular characterization of poultry salmonellae and production of formalin killed pullorum disease vaccine using local isolate in Bangladesh
5.	C-FM- 163: Development of small scale electric powered oil expeller suitable for adaptation among the rural farmers' in Bangladesh
6.	C-FPE-049: Wider adaptation of modern rapeseed, mustard and sesame varieties with production technology for yield gap reduction
7.	C-FPE-054: Up - scaling of integrated rice - duck farming in Bangladesh: Improvement of rural livelihood through community approach
8.	C-FPE-055: Impact of rice - wheat/potato mungbean cropping system on farmers employment opportunity, food security and livelihood in selected monoga prone areas in northern districts of Bangladesh
9.	L-HM-214: Study of herd health management practices for Ruminants in Bangladesh
10.	L-HM-219: Improving Livelihood through Herd Health Management and Milk market access to poor farmers living in the northern Bangladesh
11.	C-VI-006 Collection, conservation, characterizations and varietal development of garlic and onion through selection and molecular techniques

SI #	Code and Title of the project
12.	C-HV-194: Assessment of effectiveness of IPM practices for pest management in Brinjal
13.	C-HF-103: Validation of improved agricultural technologies at farmer's field in hill farming system
14.	C-HF-104: Ecological determinants of bamboo flowering and rodent population outbreaks in the Chittagong Hill Tracts
15.	C-HV-202: Global market analysis for production and export potentials of high value crops in Bangladesh
16.	C-PHT-175: Up-scaling and adoption of hybrid dryer for quality grain seed production
17.	C-PHT-179: Increasing storability of potato in natural storage and income generation through small scale processing of potato
18.	C-SPM-092: Quality improvement of farmers stored seeds of mungbean, lentil, chickpea and its relation to diseases development in Bangladesh
19.	C-SPM-096: Seed production of summer onion varieties: Determining Appropriate Method and Agro-ecological Condition for Optimal Production
20.	C-S-144: Maximizing yield of tea in some selected problematic Acidic soils through improved management practices
21.	F-SE-290: Factors affecting shifting from food insecurity to food security, A study of selected Monga prone areas
22.	F-SE-291: Assessment of techno-Socioeconomic Resources and development of strategies for Promoting food and economic securities of Ethnic communities in Bangladesh
23.	C-S-132: Agricultural land loss and food security: An Assessment
24.	SE-MS-266: Processing of indigenous fruits and vegetables to improve livelihood of rural poor in Madhupur Region
25.	SE-MS-279: Promotion of Agricultural Marketing in Hills
26.	SE-MS-285: Capacity building of the farmers through exporting comparative advantaged horticultural products
27.	SE-MS-287: Linking small farmers with supermarkets through promotion of peri-urban agriculture
28.	C-VI-025: Rice germplasm collection and conservation from hilly, coastal, haor and other areas of Bangladesh

### List of NATP Phase-II CGP Projects under 1<sup>st</sup> Call (23 projects)

SL #	Code and Title of the project
29.	<b>C-CA- 109:</b> Development of appropriate irrigation and water management technologies for increasing and sustaining crop production in the saline coastal area of Bangladesh
30	<b>C-CA- 113:</b> Adaptation of improved Sesame varieties in Khulna District optimizing sowing time and Nitrogenous fertilizer management
31	<b>C-CA- 116:</b> Improvement of cropping system through introduction of pulse and species crops during the fallow period in Khulna area
32	<b>C-FM- 173:</b> Design and development of power tiller for dry and wet crop land cultivation in Bangladesh
33	<b>C-FPE- 033:</b> Evaluation of herbicide use in Bangladesh agriculture with special reference to wetland Rice
34	<b>C-FPE- 051:</b> Validation and Up-scaling of Improved Varieties of Mungbean, Blackgram, Groundnut and Sweet Potato in the Char Areas of Jamalpur and Sherpur Districts
35	<b>C-FPE- 052:</b> Productivity Improvement of Acid Soil by Using Dolochun in Dinajpur and Thakurgaon Districts
36	<b>C-FPE- 063:</b> Determination of factors responsible for yield Gaps in rice and wheat at farmer's field

SL #	Code and Title of the project
37	<b>C-VI- 010:</b> 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
38	<b>C-VI- 015:</b> Collection and conservation of indigenous vegetable germplasm
39	<b>SE-PP- 262:</b> Employment generation and food accessibility in the Monga regions: An analysis of existing and improved technologies
40	<b>SE-PP- 264:</b> Impact analysis of spices research and extension in Bangladesh
41	<b>C-FPE-01:</b> Study of Canker Disease of Citrus and Development of its Management Practices
42	<b>C-PHT- 177:</b> Reduction of post-harvest losses of selected horticultural crops through improved handling and packaging
43	<b>C-S- 135:</b> On-Farm soil fertility management through IPNS approach
44	<b>C-S- 149:</b> Acid soil amendment through liming for improving livelihood of farmers
45	<b>C-S- 150:</b> Validation refinement and dissemination of improved water management technologies for increasing water use efficiency and rice production
46	<b>C-S- 156:</b> Effects of Household wastes on vegetable production in monga area of Bangladesh
47	<b>C-S- 161:</b> Water management practices for increasing cropping intensity in Chapai Nawabganj district of Bangladesh
48	<b>C-S- 162:</b> Upscaling alternate wetting and drying (AWD) to reduce irrigation cost in high yielding rice production in Tangail, Pabna and Sirajgonj district.
49	<b>L-LM- 227:</b> Integrated rice/forage production and storage technology increase milk yield of diary cows of smallholder rural farmers
50	<b>L-FF-231:</b> Development of low cost milk replacer with locally available feed ingredients for rearing calves
51	<b>C-PHT- 186:</b> Small-Scale processing of functional fruits Juices applying enzyme technology

### List of NATP Phase-I CGP Projects of 2<sup>nd</sup> Call (21 projects)

SI #	Project Code and Title
01.	<b>C-1.12:</b> Rice Production in Drought Prone Areas of Bangladesh
02.	<b>C-1.21:</b> Yield gap minimization in rice using Integrated Crop and Resource Management (ICRM) practices at selected locations in Bangladesh
03.	<b>C-2.11:</b> Crop intensification in northern region of Bangladesh through up-scaling the production of short duration rice and mungbean
04.	<b>C-2.20:</b> Development of Intensive Cropping System in Two Coastal Districts for Increasing Production
05.	<b>C-3.1:</b> Validation and up-scaling of maize after T. Aman rice in two southern districts.
06.	<b>C-4.1:</b> Intensification of rice based cropping system incorporating short duration oilseed mustard varieties
07.	<b>C-4.9:</b> Yield gap reduction through short duration rapeseed-mustard and sesame varieties under existing cropping system
08.	<b>C-5.5:</b> Variety Selection and Integrated Crop Management for Yield Gap Minimization in Mustard and Sesame in the High Ganges River Floodplains
09.	<b>C-6.8:</b> Validation and up-scaling of mungbean and lentil technologies in the rice based cropping system in Bangladesh
10.	<b>C-6.9:</b> Validation and up-scaling of improved pulse production technologies for crop intensification
11.	<b>C-7.12:</b> Standardization of protocol, and in vitro production of BARI kala-3 & BARI kala-4 plantlets and their validation trial at hilly areas
12.	<b>C-9.6</b> : Rhizome Rot Disease of Ginger and Its Management
13.	<b>C-11.1</b> : Management of coconut mite

SI #	Project Code and Title
14.	C-13.2 : Selection and application of BPH management technologies in Sirajgonj
15.	NR-15.22: Validation of drought management techniques for sustainable crop production in the high barind tract
16.	NR-16.15: Testing, Validation and Up-scaling of Water Saving Technology in Rice Production(TWST)
17.	L-17.4: Development of cost-effective complete feed formula for the productive and reproductive performances of buffaloes
18.	L-19.2: Investigation on calf diseases and development of mitigation measures
19.	L-20.4: Clinicopathological and serological surveillance of Foot and Mouth Disease (FMD) and Peste des Petits Ruminants (PPR) and adopt preventive measures against them at Shakipur and Madhupur Upozila
20.	F-22.1 : Diversification of Carp Polyculture Integrating Snail ( <i>Viviparus sp.</i> ) Shing, ( <i>Heteropneustes sp.</i> ) Culture in Cage in Ponds of Adviasi Households.
21.	CC-25.1: Development of an integrated rice-fish production system in lower Meghna river floodplain of Noakhali and Lakshmipur districts.

### NATP Phase-II CGP Projects under 2<sup>nd</sup> Call (14 projects)

SI #	Project Code and Title
22.	C-1.2: Testing, validation and upscaling of cotton-rice intercropping in Chittagong Hill districts. <b>Location:</b> Bandarban, Rangamati & Khagrachari District
23.	C-1.11: Improvement of appropriate rice based cropping systems in Barind areas <b>Location:</b> 3 upazilas of Bogra district: Sherpur, Shajahanpur and shibonj upazila and on station trial of RDA Demonstration farm at Sherpur upazila, Bogra
24.	C-1.26: Minimizing yield gaps in rice-based cropping systems three northern districts. <b>Location:</b> Rangpur, Kurigram and Bogra districts.
25.	C-1.27: Productivity enhancement through improved management practices, tools and techniques <b>Location:</b> Dhamrai upazila of Dhaka & Singair upazila of Manikganj districts.
26.	C-2.19 Crop intensification through incorporating quick growing fruits and vegetables into existing cropping systems in Jhalakati and Patuakhali districts <b>Location:</b> Dumki and Patuakhali Sadar (Patuakhali) and Jhalakhati Sadar (Jhalakhati).
27.	C-4.5: Maximization of crop yield in T. Aman-Mustard-Boro cropping pattern by Agronomic Manipulation <b>Location:</b> Dhanbari & Kalihati upazila of Tanigail district.
28.	C-5.2: Yield maximization of mustard and sesame through improved package of production practices in some selection areas of the country. <b>Location:</b> Jessore Narail, Jhenaidah, Faridpur, Kushtia and Chuadanga Districts
29.	C-7.9: Validation and up-scaling of year round pineapple production technology in hilly areas. <b>Location:</b> Maulavibazar, Rangamati and Khagrachari districts
30.	C-8.14: Integrated management of major diseases of brinjal and tomato in Jamalpur & Sherpur districts. <b>Location:</b> Jamalpur & Sherpur districts.
31.	C-12.1: Development of Management Package for Powdery Mildew of BAU kul and apple kul <b>Location:</b> Satkhira, Jessore and Natore District.
32.	L-17.1: Least cost feed formulation for poultry through the production of fermented yeast product from locally available feed resources <b>Location:</b> Chittagong Veterinary and Animal Science University, Khulshi, Chittagong
33.	L-19.7: Calf mortality in large and small holder cross breed dairy Cattle: Epidemiological and Pathological investigation and mitigation <b>Location:</b> Muktagacha-Mymensingh, Sahjadpur-Sirajganj;
34.	F-21.20: Adaptation of high valued fish species shing ( <i>Heteropneustes fossilis</i> ) culture technology for Maximizing production in three Agro-Ecological zones of Bangladesh. <b>Location:</b> Narsingdi, Hobigong and Sirajgong
35.	CC-25.2: Development of integrated crop-fish production system using ditch-and-dyke method in low lying areas of Jhalakati and Bogra region <b>Location:</b> Jhalakati & Rajapur upazila of Jhalakati and Gobtoli upazila of Bogra districts

### List of BKGET funded CGP 1st Call projects (14)

SL.#	Title of the Project
1	TF 01-C: Validation and Upscaling of High Value Vegetable Crops Production in Sylhet region.
2	TF-02-C: Development/ Validation and Upscaling of Dry Direct Seeded Boro rice System for Improving Crop Productivity in Areas with Limited Water Supply
3	TF 03-C: Adaptation of High Yielding Soybean in Polder Areas in Barguna and Patuakhali districts
4	TF 04-C: Screening and Testing of Improved Aus Rice Varieties/Genotypes Suitable for Rainfed Aerobic Soil Condition of Bangladesh
5	TF 05-C: Year-round Production of Some Selected HYVs and Hybrid Vegetable Varieties in Southern and Hilly Regions of Bangladesh
6	TF 06-CT Validation and Upscaling of HYVs of Brinjal, Tomato, Bottle gourd, Ash gourd, and Pointed gourd in hilly areas of Moulvibazar
7	TF 07-C: Adaptation of Newly Released HYV Oil seeds (Mustard, Groundnut, Soybean, and Sesame) in Charland of the Padma
8	TF 08-NR: Evaluation and Upscaling of Resource Conservation Technologies (RCTs) for Improving Productivity in the Drought Prone Areas
9	TF 09-NR: Validation and Upscaling of Tricho-products for Soil Borne Disease Management in Vegetable Crops
10	TF 10-F: Adaptation of Community Enterprise Approach for Intensification of Floodplain Fish Production in Chalan Beel
11	TF 11-C: Validation and Upscaling of Off-season Jute Seed Production Technologies in Different Jute Growing Areas of Bangladesh.
12	TF 12-L: Investigation on Livestock Diseases and Development of Appropriate Control Measures in Hilly Areas
13	TF 13-F: Production Enhancement of Aquaculture through Innovative Technologies in Cage Culture System in Haor Areas of Karimganj, Kishoreganj
14	TF 14-C: Sustainable Management of Flower and Fruit Dropping of mango

### List of BKGET funded CGP 2nd Call projects (19)

SL.#	Title of the Project
1	TF 15-SF/15: Improvement of Soil Fertility and Crop Yield through Adoption of Conservation Agriculture in Mustard -Boro-T.Aman Cropping Pattern.
2	TF 16-WM/15: Collection, Evaluation and Introduction of White Maize for Human Consumption in Bangladesh
3	TF 17-ARI/15: Refining and Validation of BAU-Bro chickens.
4	TF 18-EM/15: Exploring Epidemiology, Anthelmintic Resistance and Genetic Diversity of Some Common Gastrointestinal Nematodes of Small Ruminants in Bangladesh
5	TF 19-EM/15: Community engagement in biosecurity (CEB) for the prevention of infectious diseases of poultry based on epidemiological risk analysis
6	TF 20-EM/15: Studies of Pigeon Diseases in Northern Bangladesh
7	TF 21-EM/15: Use of Probiotic to Improve Nutritional Value of Rice Straw and Its Impact of Dairy Cow Production
8	TF 22 – PS /15: Productivity Enhancement of Goor and Chewing type Sugarcane through management of Major Diseases in Non-mill Zones
9	TF 23-AM/15: Improvement and Validation of BARI seeder for grain crops under different cropping patterns and soil conditions
10	TF 24-EM/15: Epidemiological and Patho-biological Investigation of Repeat Breeding Syndrome and Development of Strategies for Improving the Fertility of Repeat Breeder Dairy Cattle
11	TF 26 – ARI /15: Validation and Upscaling of Bee Keeping Practices for Improving Yield and Quality of Bee Products
12	TF 27 – SF /15: Adaptation of Improved Soil Fertility Management Practices for Variable Soil Conditions under Intensively Cropping Systems
13	TF 29 - AM/15: Design and Development of Two Stages Drying Technique of High Moisture Grain
14	TF 30- AP/15: Sustainable Development of Aquaculture in the North-West Region of Bangladesh under Climate Changes Scenario

SL.#	Title of the Project
15	TF 31-VC/15: Market and Value Chain Studies of Selected Fruits and Vegetables with Special Reference to post Harvest Losses and Food Safety in Bangladesh
16	TF 32- SF/15: Integrated Nutrient Management for Intensive cropping in Coastal and Charland Areas of Bhola District
17	TF 33 -ARI/15: Farm Productivity Improvement in Haor Areas through Integrated Farming Systems Approach
18	TF 35 - SF/15: Integrated Nutrient Management for Sustaining Soil Fertility and Crop Productivity under Intensive Cropping System
19	TF 36 - FP/15: Maximizing Forage Production in Saline Prone Areas of South -West Coastal Belt through Improved Management practices

### List of BKGET funded CGP 3<sup>rd</sup> call projects

SL.#	Title of the Project
1	Development of Health Management Strategy against Bacterial Diseases in the Aquafarms of Bangladesh
2	Post-harvest loss reduction through improved methods and value-addition of fresh fish through better handling, processing, distribution and marketing in haor areas of Kishoreganj
3	Adaptation of Disease Management Strategy in the Existing Culture Practices of Shrimp through Aquamimicry System
4	Effects of dietary polyunsaturated fatty acid and beta glucan on broodfish (Labeo rohita, Mystus cavasius and Ompok pabda) immunity and fry quality
5	Development and Adoption of Cotton-Based Cropping System for Drought-prone Highland of Chittagong Hill Tracts
6	Development and adoption of low cost small potato planter and harvester for profitable potato production
7	Livelihood improvement through farming system research and development in floating agriculture system.
8	Livestock and Human Brucellosis: Molecular diagnosis, treatment and control
9	Epidemiological investigation on tuberculosis and campylobacteriosis associated with dairy farming practices in the selected districts of Bangladesh
10	Study on zoonotic diseases of pets and assessment of risk factors of commonly occurred zoonoses for better management
11	Value addition to feeds and fodder through bioactive component-rice herbs for safe livestock production
12	Improving Lamb Production Potentiality of Native Sheep through Selection and Genetic Enhancement
13	Value addition through pelleting and densifying of feed using crop residues for ruminants
14	Management of wheat blast caused by Magnaporthe oryzae pathotype Triticum introduction
15	Assessment of cropping patterns for sustainable intensification in drought and saline-prone ecosystems using remote sensing and geospatial modeling.
16	Adaptation of BARI released hyacinth bean varieties and up-scaling the farmer's innovation for productivity enhancement in Narsingdi region.
17	Production and dissemination of BARI released year round jackfruit variety and its management packages.
18	Improvement of cropping systems applying different agronomic management practices in salinity affected coastal zone of south-western part of Bangladesh for attaining food security and sustainability.
19	Development and adoption of a solar cabinet dryer for vegetable seeds

SL.#	Title of the Project
20	Collection characterization of potential germplasm of rape seed-mustard and participatory salt tolerant short duration variety development for increasing cropping intensity in southern coastal Bangladesh
21	Identification of Resistant Sources against Gallmidge and Development of Tolerant Advanced Breeding Lines
22	Sustainable management of maize insect pests with special emphasis on the corn borer, the emerging species through innovative, participatory and collaborative research.
23	Promoting production of beans (bush bean, mung bean and soybean) for increased income of rural people in the south central coastal region of Bangladesh.
24	Improvement of agro-forestry practices for better livelihood and environment in Charland area of Tista River Basin.
25	Up-scaling of Rice-Bean cropping system for increased yield, Nutrients and soil productivity.
26	Validation of good practices of on-farm lamb production systems

### List of BKGET funded Basic Research projects implemented by KGF

SL.#	Title of the Project
1	BR 1-C/17: Study Of The Physical Mechanism Related To Water And Heat Stress Tolerance In Wheat Genotypes
2	BR 2-C/17: Linkage and QTL mapping of tungro resistance in rice.
3	BR 3-C/17: Exploring new source of blast resistance and pyramiding blast resistant genes into boro rice.
4	BR 4-C/17: Physiological Mechanism of water logging tolerance in sesame.
5	BR 5-C/17: Environmental Stresses in Wheat: Identification and Expression of the Influential Genes at Critical Growth Stages and Analysis of Their Genetic Architecture.
6	BR 6-C/17: Physiological aspects of salinity tolerance of mungbean genotypes for southern region of Bangladesh.
7	BR 7-C/17: Rice physiological development through trait discovery for boosting rice yield in changing climatic conditions.
8	BR 8-C/17: PCR Based Sequencing of Salt and Heat Tolerant Potato Varieties Using Chloroplast DNA and QTL Analysis.

### Technology Piloting Programs (TPP)

#### List of NATP funded pilot projects implemented by KGF

1. **C-HF-103:** Validation of improved agricultural technologies at farmer's field in hill farming system. Implemented by BARI
2. **C-PHT-179:** Increasing storability of potato in natural storage and income generation through small scale processing of potato. BARI
3. **C-CA-113:** Adaptation of improved Sesame varieties in Khulna District optimizing sowing time and Nitrogenous fertilizer management. Khulna University
4. **C-S-161:** Water management practices for increasing cropping intensity in Chapai Nawabganj District of Bangladesh. BINA

### **List of BKGET funded pilot projects implemented by KGF**

5. **P-1:** Crop intensification in Barind area through effective drought management. BSMRAU
6. **P-2:** Management and control of mites in coconut through farmers' capacity enhancement. BARI
7. **P-3:** Increasing rice production adopting improved production technologies in the tidal floodplain. BARI
8. **P-4:** Upscaling improved jhum cultivation introducing intercropping rice with cotton.
9. **P-5:** Upscaling of mungbean-rice pattern in the Charlands of Kurigram. BARI
10. **P-6:** Integrating crops and fish culture through land conversion into-ditch-dyke system
11. **P-7:** Up-scaling and Validation of a proven technology on management of the major diseases of Brinjal and Tomato. BARI
12. **P-8:** Validation and piloting of improved production technologies in Gopalganj Basin. BARI
13. **P-9:** "Validation of up-scaling of Improved Rice Based Cropping Systems incorporating Mustard and Potato in Northern Districts". BARI
14. **P-10:** "Up-Scaling and validation of Rhizome Rot Disease Management". BARI
15. **P-11:** Validation and scaling up of T.Aman - Potato/Mustard - Mungbean -T.Aus Cropping System in Northern districts of Bangladesh. BSMRAU
16. **P-12:** Up-scaling of cost effective formula feeds and improved management practices for increasing milk and meat production from buffaloes. BAU
17. **P-13:** Adaptation of Community Enterprise Approach in Tidal Floodplains for crop-fish culture - Jhalokathi Model. SHISUK
18. **P-14:** Pilot Project on "Up-scaling and Campaigning of Rice-Cotton intercropping in Bandarban and Khagrachari districts". CDP
19. **P-15:** Upscaling of high value shing fish culture technology in homestead household ponds
20. **P-16:** Improving the animal health and productivity through mobile veterinary services
21. **P-17:** Upscaling of tricho-compost and tricho-leachate production for disease management in vegetable and spices (rhizome and bulb crops)
22. **P-18:** Scale up of Community Enterprise Approach (CEA) for Intensification of floodplain fish production in Chalan beel



## **Commissioned Research Program (CRP)**

### **List of BKGET funded CRP projects**

1. CRP-1: Harnessing the Potential of Hill Agriculture: Enhancing Crop Production through Sustainable Management of Natural Resources
2. CRP-2: Modeling Climate Change impact on agriculture and developing mitigation and adaption strategies for sustainable agriculture production in Bangladesh
3. CRP-3: Strengthening Sugarcane Research and Development in the Chittagong Hill Tracts
4. CRP-4: Increasing livestock production in the Hills using better husbandry practices, health services and improving market access through value and supply chain management
5. CRP-5: Development of Upazila land suitability Assessment and Crop Zoning Systems of Bangladesh

## **International Collaborative Program (ICP)**

### **List of BKGET funded ICP projects**

Projects in collaboration with Australian Centre for International Agricultural Research (ACIAR):

1. ICP-1: Cropping system intensification in the salt affected coastal zones of Bangladesh and India
2. ICP-2: Nutrient management for diversified cropping in Bangladesh
3. ICP-3: Incorporating salt tolerant wheat and pulses into smallholder farming systems in Southern Bangladesh

## **Capacity Enhancement Program (CEP)**

### **List of BKGET funded CEP projects**

1. CEP-1: Capacity enhancement of NARS institutes through Agricultural Research Management Information System (ARMIS)
2. CEP-2: Capacity building for conducting adaptation trials on seaweed cultivation in the coastal region of Bangladesh
3. CEP-3: Mitigating Greenhouse Gas (GHG) emission from rice-based cropping systems through efficient fertilizer and water management
4. CEP-4: Skill development trainings for the scientists, field veterinarians, livestock workers and poultry/dairy farmers

## List of potential technologies of KGF generated from CGP projects

Initially under NATP funding, for undertaking CGP projects major focus was given on On-farm applied and adaptive research including marketing, socio-economic and value adding aspects. Innovation and generation of new technology was not given priority consequently, from 84 completed CGP projects only 30 technologies have been identified to be potential/promising. Out of 16 completed projects under BKGET funding 10 projects have been identified to be promising and waiting for further dissemination through piloting. Listed below are the promising technologies developed from the completed CGP projects.

### Promising technologies from NATP funding (Out of 84 projects)

1. High yielding garlic varieties developed and released: Two varieties; BAU Rashun-3 (8.6 mt/ha instead of traditional variety-7 ton) and BAU Rashun-4 (9 mt/h)
2. High yielding pulse varieties developed and released: Two varieties; BARI Chola-9 (Resistant to BMG) and BARI Mashur-7 (Resistant to Rust and S. blight disease)
3. Rice-cotton intercropping with improved management practices as an alternative to traditional jhum farming in the Hills (Jhum income Tk. 10,000 per ha and rice cotton Tk. 70,000)
4. Homestead vegetable production practices (Khagrachari Model) throughout the year for the poor farmers in the hills (Vegetable production increased from 40 gm to 120 gm/head)
5. High yielding sesame variety (BARI-Till-4) and its production practices for growing in the saline areas of Khulna region. (Yield 1.5 mt/h instead of 1.0 mt)
6. Conversion of Dhorola river char lands covered with vetivar grass into green crop lands (cropping intensity increased 150% Amon-fallow-mug)
7. Saline (moderate-high) tolerant crop varieties for growing in the coastal areas of Noakhali (Sugar-beet, sunflower and Barley)
8. Pullorum vaccine for poultry against *Salmonella* Pullorum, a bacterial disease
9. Improved animal health service management practices and milk marketing method for the char areas of Rangpur and Jamalpur (Disease incidence rate reduced by 37%, Milk production increased 0.8 L/day/cow, Producer price of milk increased 37%)
10. Low cost milk replacer for calves to save the costly milk without affecting the health of calves
11. Cost effective complete feed formula for improving productive and reproductive performances of buffaloes
12. Yeast and Trichoderma based low cost feed for broiler using locally available feed resources

13. Package for controlling calf mortality in the cross bred dairy herd through addressing seven risk factors that influence the mortality in calves
14. Package for controlling and management of coconut mites (Spraying with "Omite", a miticide)
15. Improved management practices for the control of rhizome rot disease of Ginger (Seed treatment with Clorox against foot rot)
16. Improved management practices for the control of canker disease of citrus (By Sanitation, pruning older branches and treatment with chemicals: Sodium orthophenyl phenate (Sopp))
17. Integrated management practices for the control of major diseases of Brinjal and Tomato (Seed, seed bed & soil treatment can save 40-45% yield reduction)
18. Intensive cropping system (3 crops/year) for the drought-prone areas of Barind tract with & without irrigation. Short duration: Aman-Wheat-Mung bean
19. Shorter duration HYV BARI Sharisha-14/15 and their management practices for inclusion in between T. Aman-Fallow-Boro cropping pattern
20. Improved seed production practices for the summer onion (800 kg to 900 kg/ha)
21. Land productivity Improvement of acid soil through application of Dolo chun (1 ton/ha)
22. Relay inter planting of rice-chickpea, rice-lentil and rice-maize systems in tidal floodplain ecosystem for crop intensification and increased production
23. Improved cropping intensity and system productivity through incorporating mustard and sesame in the cropping systems in some specific locations/AEZ (Sirajgonj, Chanpai Nawabganj and Rajshahi keeping the soil nutrient balance)
24. Intensive cropping system (4 crops/year) with less irrigation water requiring crops for the N-W region of Bangladesh (Cropping Pattern: T. Aman-Potato/Mustard-Aus-Mug)
25. Intensive cropping system (3 crops per year) in light textured soil for the monga prone areas of Northern Bangladesh
26. Integrated crop-fish production system using ditch-and-dyke method in tidal floodplain areas of Bangladesh
27. Shing fish (*Heteropneustes fossilis*) culture technology in the homestead/household ponds Hybrid dryer, operated either by electricity or solar power for seed drying (Rice, wheat and maize)
28. Improved STW operation through installation of a check valve at the suction pipe (Starting is easier than before)
29. Low-cost thatch store house with a capacity of 8 tons for storing potato tuber at farmers level (store for 4-5 months per Kg cost 1 Taka)
30. Small electric power oil expeller with capacity of 40 kg/hour using locally available materials

## **Promising technologies from BKGET funding (Out of 16 projects)**

31. Dry direct seeded boro rice system for improving crop productivity in areas with limited water supply
32. Resource conservation technologies (RCT) for improving productivity in the drought prone areas
33. Tricho-products for soil borne disease management in vegetable crops
34. Community enterprise approach for intensification of floodplain fish production in Chalanbeel
35. Off-season jute seed production technology in different jute growing areas of Bangladesh.
36. Appropriate control measures for livestock diseases in Hilly areas
37. Cage culture system in Haor areas for enhancement of aquaculture
38. Sustainable management of flower and fruit dropping of mango
39. Package for treatment and control of pigeon diseases
40. BAU-broiler chicken (white and colored): The energy efficient, disease resistant broiler chicken with the taste of local poultry