

Proposed Research Program 2024-2025

Sl. No.	Program Area/Project/ Experiment Title & Duration	Major Objective	Expected output	Annual Budget (Thousand Tk.)
	Agricultural Statistics Division			
	Stability analysis of BRRV Varieties Duration: From 2001 to 2024 (Contd.)	<ol style="list-style-type: none"> 1. To determine the stability index of BRRV varieties 2. To estimate location-wise stability index of BRRV varieties 3. To determine the stability index of BRRV varieties according to the growth duration 4. To find out the location-wise yield performance of BRRV varieties at different years. 5. To find out the overall yield performance of BRRV varieties at different locations and years. 6. Season, year and location wise database on BRRV varieties 	Stability index of BRRV varieties according to seasons	550
	Genotype x Environment interaction of BRRV varieties Duration: 1 year	To Identify BRRV released rice genotypes that have both high mean yield and stable yield performance across different environments for different ecosystem of Bangladesh	Genotype x Environment Interaction effect of BRRV varieties	330
	Rice database and analysis system (RDAS) Duration: 1 year	<ol style="list-style-type: none"> 1. To develop a web based integrated framework on 'Rice Database and Analysis System (RDAS) 2. To create map and graph based on rice data. 	Automated informative and user-friendly rice database and analysis system (RDAS)	300

Maintenance of Rice and related Database Duration: 1 year	1. To maintain up-to-date computerized information on rice and related crops 2. To determine year wise GR of Rice Production in Bangladesh 3. To maintain up-to-date computerized information on climatic factors both BRRI regional stations and BMD stations data. 4. To make comparison between BRRI stations and BMD stations data. To produce various maps from these data	1. Database on rice and related crops. 2. Year wise GR of Rice Production in Bangladesh 3. Database on climatic factors 4. Various climatic maps. 5. Growth rate and trend scenario of area, production and yield of rice in Bangladesh.	300
New edition of Simple Lessons from Biometry Duration: 1 year	1. To update and publish a new edition of ‘Simple Lesion from Biometry’ 2. To incorporate novel experimental designs 3. To incorporate novel analytical techniques for various types of data 4. To incorporate the other topics related to biometry	1. Update and publish a new edition of ‘Simple Lesion from Biometry’ 2. Incorporate novel experimental designs, topics and analytical techniques for various types of data	300
Suitability Mapping of BRRI Varieties Duration: 1 year	To construct suitability map of BRRI rice varieties (BRRI dhan103 – BRRI dhan106)	1. Suitable and not suitable areas for particular rice varieties	50
Climate Mapping of Temperature and Rainfall of Bangladesh Duration: 1 year	1. To determine expected maximum and minimum temperature and rainfall in different region for rice in Bangladesh. 2. To determine areas of critical maximum and minimum temperature and rainfall map of Bangladesh for rice during the period. 3. To estimate the return period of	1. Different climatic factors map of Bangladesh 2. Changing Pattern of climatic factors.	50

		extreme rainfall and high temperature.		
Season wise rice area mapping of Bangladesh Duration: 1 year	<ol style="list-style-type: none"> To construct season wise rice area map of Bangladesh. To estimate season wise rice area of Bangladesh To validate and compare the rice database from various sources <p>To find out the best source of rice area data.</p>	1. Season wise rice cultivated area.	200	
Projected Climatic Factors (2050) Maps of Bangladesh Duration: 1 year	<ol style="list-style-type: none"> To construct projected climatic factors maps of Bangladesh for 2050 To determined projected climatic factors value district/division wise of Bangladesh for 2050. To deliver an idea about future climate to researchers and planners 	1. Projected climatic factors maps of Bangladesh.	300	
Suitability Mapping of Various Cropping Pattern Duration: 1 year	To construct suitability map of various cropping pattern	Suitable and not suitable areas for particular cropping pattern.	300	
Delineation of Rice Area changes in Costal Area of Bangladesh Using Remote Sensing Data and Machine Learning Approach Duration: 1 year	<ol style="list-style-type: none"> Delineate the rice area changes over time To quantify the types of land cover that migrated into and out of the rice-growing region. 	<ol style="list-style-type: none"> This will give information about the trend of rice area change. <p>Come to know shifting pattern of rice area.</p>	300	
Rice growth monitoring through remote sensing and GIS for smart management Duration: 1 year	<ol style="list-style-type: none"> Establish a reliable methodology for monitoring rice growth using RS data and GIS techniques. Create a spatial-temporal model to predict potential rice yield based on the monitored growth stages. 	<ol style="list-style-type: none"> Develop a detailed methodology document outlining step-by-step procedures for rice growth monitoring using remote sensing data and GIS techniques. <p>Develop a decision support system that</p>	300	

		3. Use the monitoring data to optimize resource, including water, fertilizers, and pesticides to enhance overall efficiency and sustainability	helps farmers and stakeholders make informed choices for resource management.	
	Develop an online integrated platform for collecting rice mapping data Duration: 2024 (Contd.)	To developed an online platform for collecting rice mapping data integrating Kobo toolbox server and ODK Mobile apps	An online rice mapping data collection platform	600
	Digitalized Tour Bill Management System for BRRH HQ Duration: 2024 (Contd.)	To develop a digital tour bill management system for BRRH HQ	A web application for tour bill management system of BRRH HQ	300
	Develop a dynamic web application for visualizing and analyzing the rice disease surveillance data Duration: 1 year	To Develop a dynamic web application for visualizing and analyzing the rice disease surveillance data	A dynamic web application for visualizing and analyzing the rice disease surveillance data	500
	Update the web application to calculate the Stability Index for BRRH Stability Model Duration: 2023 (Contd.)	To update the web application to calculate the stability index for BRRH stability model.	An updated web application for calculation the stability index using BRRH stability model.	3.00
	Update the Platform for BRRH Developed Management Information System (MIS) Duration: 2023 (Contd.)	To update the unique platform for BRRH developed MIS	An updated unique platform for BRRH developed all MIS	1.00
	Digitalized Budget Management System of BRRH Duration: 1 year	To update the digital budget management system for BRRH	Updated digital budget management system of BRRH	1.00
	Digitalized quota management system of BRRH Duration: 2021 (Contd.)	To update the digital quota management system for BRRH	Updated digital quota management system of BRRH	3.00

<p>Digitalized new salary management system of BRRRI Duration: 2020 (Contd.)</p>	<p>To update the digital salary management system of BRRRI as user need.</p>	<p>Updated the digital salary management system of BRRRI</p>	<p>2.00</p>
<p>Digitalized labour management system of BRRRI Duration: 2019 (Contd.)</p>	<p>To update Labour Management System (LMSV1) of BRRRI</p>	<p>Updated digitalized labour management system of BRRRI</p>	<p>7.00</p>
<p>Digitalized Casual Leave Application System Duration: 2022 (Contd.)</p>	<p>To update the digital Casual Leave Application System for Agricultural Statistics Division</p>	<p>Updated the digital casual leave application management system of Agricultural Statistics Division</p>	<p>3.00</p>
<p>Develop real time dashboard based monitoring system for location-specific insect and disease using artificial intelligence (AI) and Machine Learning Method (MLM). Duration: 2024 (Contd.)</p>	<ol style="list-style-type: none"> 1. To develop real time dashboard based monitoring system for location-specific insect and disease using AI and MLM; 2. To determine disease and insect identifying locations through collecting necessary images and reports; 3. To manage, maintain and host web-based application at cloud server. 	<p>This platform will give disease diagnosis, management and spatio-temporal reports in time. So crop loss will be minimized gradually.</p>	<p>65.50</p>
<p>Develop an artificial intelligence (AI) based interactive e-Agriculture software & databank for research data. Duration: 2024 (Contd.)</p>	<ol style="list-style-type: none"> 1. To develop AI based interactive e-Agriculture software for research data of BRRRI. 2. To develop AI based dashboard monitoring system. 3. To develop a big data databank using 4IR technology. 4. To manage and maintain the e-Agriculture software, dashboard monitoring system and databank. 	<ol style="list-style-type: none"> 1. AI based interactive e-Agriculture software for research data of BRRRI. 2. AI based dashboard monitoring system for BRRRI. 3. Big data databank will be developed. 4. Manage and maintain AI based e-Agriculture software, dashboard monitoring system and databank. 	<p>9500.40</p>
<p>Digitalized allotment of house Management System of BRRRI</p>	<ol style="list-style-type: none"> 1. To develop the digital allotment of house management system software for BRRRI 	<ol style="list-style-type: none"> 1. Digital allotment of house management system software will be developed. 	<p>1100.50</p>

<p>(In collaboration with Administration Section) Duration: 2024 (Contd.)</p>	<ol style="list-style-type: none"> 2. To host the allotment of house management system software at server. 3. To manage and maintain the allotment of house management system software. 	<ol style="list-style-type: none"> 2. Manage and maintain Digital allotment of house management system software. 	
<p>Develop a mobile responsive website for BRRI. Duration: 2024 (Contd.)</p>	<ol style="list-style-type: none"> 1. To develop a new mobile responsive website for BRRI. 2. To manage domain or sub-domain for the new website. 3. To host the new website at server. 4. To manage and maintain the new website. 	<ol style="list-style-type: none"> 1. A new mobile responsive website for BRRI. 2. Domain or sub-domain for the new website. 	470.00
<p>Smart profiling of rice varieties for disaster-prone zones of Bangladesh Duration: 2023 (Contd.)</p>	<ol style="list-style-type: none"> 1. To explore mechanism for profiling rice varieties with respect to environmental suitability, physical and physiological characteristics, yield potential and tolerance to abiotic and biotic stresses; 2. To electronically present and disseminate the newly developed smart profiled varieties information through a dynamic web application and mobile app to stakeholders; 3. To manage, maintain and host mobile and web app at server. 	<ol style="list-style-type: none"> 1. Provide varietal information through this profiler which will be useful to all stakeholder i.e. farmer, researcher and extension official. 2. An easy comparison of the varieties will develop for a specific environment and quickly picking up the preferred one(s); 3. New ideas will be created in research management. As well as new technologies will be developed. 4. Adopt precision agriculture and automations solutions for choosing right varieties. 5. Manage and maintain smart mobile and web app. 	45.00
<p>Sensor-based rice pest management through Artificial Intelligence (AI) technology of</p>	<ol style="list-style-type: none"> 1. To develop AI based mobile and web App for BRRI. 2. To identify AI scopes in rice research 	<ul style="list-style-type: none"> • Time, Cost and Visit (TCV) will be less and quality (Q) will be increased. • Adopt precision agriculture and 	50.00

BRRI. Duration: 2022 (Contd.)	engaging scientists, extension worker and farmers. To manage, maintain and host AI based mobile and web app at server.	automations solutions to close rice yield gaps. • New ideas will be created in research management. As well as new technologies will be developed. Manage and maintain Ai based mobile and web app.	
New version of rice knowledge bank (RKB) mobile Apps	1. To develop the new version of RKB mobile apps. 2. To develop a push notification system. 3. To manage and maintain RKB Mobile apps.	1. Disseminate RKB at all regional stations of BRRI as well as in almost all corners of Bangladesh. 2. Extend and update regularly as routine work.	1100.20
Develop a new website for BRRI.	To develop a new website for national and international seminars and symposiums. To manage domain or sub-domain for the new website. To host the new website at server. To manage and maintain the new website.	1. A new website for national and international seminars and symposiums. 2. Domain or sub-domain for the new website.	600.00
“BRRI Alapon” Telephone Directory Mobile App of BRRI. Duration: 2018 (Contd.)	1. To develop telephone directory mobile app for BRRI. 2. To communicate through mobile app via voice call, video call, email or SMS. 3. To provide location sharing through mobile app. 4. To provide all types of meeting, seminar etc. notice via SMS through mobile app.	1. Digitalize internal communication system to each other of BRRI. 2. Minimize time, cost and visit (TCV) for sharing instant information using the app.	8.00

Vehicle Requisition Management System of BRRI. Duration: 2017 (Contd.)	<ul style="list-style-type: none"> • To develop vehicle requisition management system (VRMS) for BRRI. • To inform through SMS, on the basis of demand vehicle at BRRI. • To provide SMS for drivers for confirming their upcoming duty. • To host VRMS at server. 	<ul style="list-style-type: none"> • Digitalize Transport division using SMS based VRMS service. • Manage and maintain the VRMS system. 	1.00
Training on Innovation, Service Process Simplification (SPS) and e-Nothi system for enhancing capacity of BRRI employee. Duration: 2017 (Contd.)	<ol style="list-style-type: none"> 1.To provide various training on public service innovation (PSI), SPS and e-Nothi management to BRRI scientists and officers for developing capacity. 2.To bring qualitative changes in the internal research work process and service delivery in BRRI HQ and respective regional stations. 3.To compile various innovative idea through PSI and SPS training for piloting and replication activities. 	<ul style="list-style-type: none"> • Enrich capacity of BRRI scientists and officers through various PSI and SPS training. • Skills of implementation process will be developed through innovative approach. 	12.00
“BRRI Rice Doctor” Apps for BRRI. Duration: 2017 (Contd.)	<ol style="list-style-type: none"> 1. To diagnosis insect and pest through rice doctor Apps for BRRI. 2. To manage and maintain rice doctor apps. 3. To host rice doctor Apps at server. 	Manage and maintain rice doctor.	5.00
BRKB Website Management <i>(In collaboration with training, breeding and others research divisions)</i>	<ol style="list-style-type: none"> 1. To develop and modify the design of BRKB Website. 2. To manage and maintain BRKB Website through regular updating of the information and documents. 	<ol style="list-style-type: none"> 1. Provide more benefit to all users specially farmers, extension workers, researchers etc. 2. Include more information as well as national issues associated with rice production and training. 	300.00
BRRI Web Portal Management.	1. To develop and modify the design of	1. New features for BRRI web portal.	400.00

		BRRRI Web Portal. 2. To manage and maintain BRRRI Web Portal through regular updating of the information and documents.	2. To increase hosting spaces gradually.	
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