Research Program 2021-2022

Plant Breeding Division			
	Program Area: VARIETAL DEVELOPMENT		
Sl. No	**Research Title**	**Objectives**	**Location**
1.	**Project 1: Development of Upland Rice (B. Aus and Jhum rice)**		
	1.1 Hybridization	To develop varieties in combination of multiple traits such as quick seedling emergence and vigorous growth, short growth duration (95-100 days), tolerance to lodging, drought and pre-harvest sprouting and good eating quality	BRRI, Gazipur
	1.2 Confirmation of F_1	To confirm the cross as true F_1s and use of the selected F_1s to produce F_2 seeds	BRRI, Gazipur
	1.3 F_5 population	Rapid advancement of segregating population for shortening breeding cycle through field RGA	BRRI, Gazipur
	1.4 Identification of superior lines from LST	Rapid advancement of segregating population for shortening breeding cycle through field RGA	BRRI, Gazipur
	1.5 Observational Yield Trial (OYT)	To select genetically fixed lines based on uniformity in morpho-agronomic characters having early seedling emergence, good seedling vigor, uniformity in heading, short growth duration	BRRI, Gazipur
	1.6 Preliminary Yield Trial (PYT)	Evaluation of initial yield potential in replicated plots.	BRRI, Gazipur
	1.7 Secondary Yield Trial (SYT)	Confirmation of yield potential in replicated plots	BRRI, Gazipur
	Project 1A: Development of Jhum Rice		
	1A.1 Hybridization	To develop high yielding rice variety with low (10-19%) to high (25%) grain amylose content and drought tolerance suitable for Jhum cultivation	BRRI, Gazipur
	1A.2 Confirmation of F_1	To confirm the cross as true F_1s and use of the selected F_1s to produce F_2 seeds	BRRI, Gazipur
	1A.3 F_2 population	To advance progenies with emphasis on high yield with low (10-19%) to high (25%) grain	BRRI, Gazipur

		amylose content and drought tolerance suitable for Jhum cultivation	
	1A.4 Observational Yield Trial (OYT)	To select genetically fixed lines based on uniformity in morpho-agronomic characters having high yield with low (10-19%) to high (25%) grain amylose content and drought tolerance suitable for Jhum cultivation	BRRI, Gazipur
	1A.5 Preliminary Yield Trial (PYT)	Evaluation of initial yield potential in replicated plots.	BRRI, Gazipur
	1A.6 Secondary Yield Trial (SYT)	Confirmation of yield potential in replicated plots	BRRI, Gazipur
	1A.7 Advanced Yield Trial (AYT)	Advanced evaluation of promising entries in replicated trial under targeted hill condition	Chottogram hill districts (Khagrachari and Bandarban)
2	**Project 2: Development of Transplanted Aus (T. Aus) Rice**		
	2.1 Hybridization	Introgression of earliness, pre-harvest sprouting tolerance and tolerance to high temperature into high yielding varieties	BRRI, Gazipur
	2.2 Growing of F_1 populations	To confirm the crosses as true hybrid	BRRI, Gazipur
	2.3 Segregating population	Advancement of segregating generations following single seed descent-based RGA method	BRRI, Gazipur
	2.4 Line Stage Testing (LST)	Screening of genetically fixed breeding lines for homogeneity, plant type, grain yield potential, grain quality and other attributes	BRRI, Gazipur
	2.5 Observational Yield Trial (OYT)	Selection of homogeneous breeding lines with acceptable grain quality having high yield with good plant type	Gazipur, Cumilla, Rajshahi, & Rangpur
	2.6 Preliminary Yield Trial (PYT)	Initial yield evaluation of advanced breeding lines in replicated trials for whole Bangladesh	Gazipur, Cumilla, Rajshahi, & Rangpur
	2.7 Advanced Yield Trial (AYT)	To evaluate specific and general adaptability of the advance breeding lines as compared with standard checks under on station condition	BRRI, Gazipur
	2.8 Regional Yield Trial (RYT)	Evaluation of agronomic	Gazipur, Sonagazi

	for non-saline tidal prone ecosystem	performance, specific and general adaptability under on station condition	and Greater Barishal
	2.9 Proposed Variety Trial (PVT)	On-farm evaluation of proposed genotype by the NSB team for recommendation to release as a new variety.	Sites selected by SCA
	2.10 Maintenance and seed increase of key parents	To maintain genetic purity of parent materials with seed production	BRRI, Gazipur
3	**Project 3: Development of Shallow Flooded Rice Varieties**		
	3.1 Hybridization	Generation of genotypes in combination with slow elongation, high yield and submergence tolerance for shallow flooded water sub-ecosystem (flood water depth 0.5-1.0 m)	BRRI, Gazipur
	3.2 F_1 confirmation	Confirmation of crosses with introgression of genes for slow elongation, high yield and submergence tolerance for shallow flooded deep-water sub-ecosystem (flood water depth 0.5-1.0 m) into improved genetic background	BRRI, Gazipur
	3.3 Segregating population	Advancement of segregating generations following single seed descent-based RGA method	BRRI, Gazipur
	3.4 Observational Yield Trial (OYT)	Evaluation of tall breeding lines	BRRI, Gazipur
	3.5 Preliminary Yield Trial (PYT)	Initial yield evaluation of advanced breeding lines in replicated trials for shallow flooded sub-ecosystem	BRRI, Gazipur
	3.6 Secondary Yield Trial (SYT)	Confirmation of potential advanced lines compared to standard checks in replicated trial	BRRI, Gazipur
	3.7 Maintenance and seed increase of land races	Maintenance of seed purity and seed increase of land races	BRRI, Gazipur
4	**Project 4: Development of Rainfed Lowland Rice (RLR), T. Aman**		
	4.1 Hybridization	Introgression of genes from diverged genetic background for improvement of standard T. Aman varieties	BRRI, Gazipur
	4.2 Confirmation of F_1	To confirm the crosses as true hybrid	BRRI, Gazipur

	4.3 Field RGA	Rapid advancement of F_3-F_5 generations through following single seed descent-based RGA method	BRRI, Gazipur
	4.4 Line Stage Testing (LST)	Selection of progenies with improved plant type, earliness, acceptable grain quality and high yield potential compared to standard varieties	BRRI, Gazipur
	4.5 Observational Yield Trial (OYT)	Selection of homogeneous breeding lines with desirable agronomic characters with less or no unproductive tiller, intermediate plant height, short growth duration, acceptable grain quality and high yield potential	Gazipur, Cumilla and Rangpur
	4.6 Preliminary Yield Trial (PYT)	Initial yield evaluation of advanced lines compared to standard checks	BRRI, Gazipur
	4.7 Secondary Yield Trial (SYT)	Confirmation of yield potentiality of the advanced lines compared to standard checks	BRRI, Gazipur
	4.8 Regional Yield Trial (RYT)	To evaluate specific and general adaptability of the advance breeding lines as compared with standard checks in on-station condition	Gazipur, Cumilla, Satkhira, Kushtia, Rangpur, Rajshahi and Sonagazi
5	**Project 5: Improvement of deep-water rice**		
	5.1 Hybridization	i. To develop semi deep water/ stagnant rice varieties with strong stems, higher grain (3.5 - 4.5 t/ha) and straw (14 - 15 t/ha) yield, moderate elongation, drought and submergence tolerance. ii. To develop deep-water rice varieties with facultative type elongation and drought tolerance, higher grain (2.5 - 3.5 t/ha) and straw (10 - 12 t/ha) yields. iii. To develop materials having perennial growth habit, vegetative propagation ability, fast growth and tallness, higher grain and straw yield.	BRRI, Gazipur
	5.2 F_1 confirmation	Confirmation of crosses with introgression of genes for slow and	BRRI, Gazipur

		fast elongation, higher grain and straw yield for semi and deep flooded environment	
	5.3 Segregating population	Advancement of segregating generations under rainfed conditions	BRRI, Gazipur
	5.4 ALART, stagnant shallow flooding in tidal areas (tall and fast growth)	Selection of tall advanced breeding lines, lodging tolerance, fast growth, more grain yield for stagnant tidal conditions	7 locations at BRRI Satkhira and Barishal
	5.5 RYT-2, shallow flood (slow elongation, more straw and grain yield)	Selection of semi deep-water rice advanced lines having moderate elongation, submergence tolerance, more straw and grain yield	6 locations at Sylhet, Cumilla, Sirajganj Munshiganj, Manikganj and Faridpur
	5.6 ALART (Deep flood)	Evaluation of deep-water advanced breeding and local pure lines having fast elongation, more straw and grain yield for deep flooding conditions	9 locations at Sylhet, Sirajganj, Pabna, Cumilla, Gopalganj, Munshiganj, Manikganj and Faridpur
	5.7 PVT (Semi-deep-water condition)	Adaptive trial of 3 tall advanced breeding lines having fast growth, moderate elongation, submergence and drought tolerance, more straw and grain yield for semi-deep-water condition	9 locations at Sylhet, Pabna, Sirajganj Cumilla, Chandpur, Faridpur, Manikganj, Tangail, and Munshiganj
	5.8 Collection and seed increase of deep-water rice land races	Maintenance of seed purity and seed increase of land races having higher elongation ability	BRRI Gazipur
	5.9 Seed increase of BRRI dha91 and conducting demonstration trials	Increasing the seeds of BRRI dha91 and to set establish trials in farmers' field	Gazipur, Sylhet, Sirajganj, Pabna, Cumilla, Tangail, Chandpur, Brammonbaria, Gopalganj, Bagerhat, Munshiganj, Manikganj and Faridpur
6	**Project 6: Development of Salt Tolerant Rice (T. Aman)**		
	6.1 Hybridization	Introgression of salinity tolerant traits/ gene(s) in high yielding varieties suitable for RLR ecosystem	BRRI, Gazipur
	6.2 Confirmation of F_1	To confirm the crosses as true	BRRI, Gazipur

		hybrid	
	6.3 Quality check (QC) analysis of F1s	Generation Advancement	BRRI, Gazipur
	6.4 FRGA	Generation Advancement	BRRI, Gazipur
	6.5 Line Stage Test (LST) Trial	Identification of uniform lines based on plant height, flowering date and grain type	Satkhira, Gazipur
	6.7 Observational Yield Trial (OYT)	Selection of genetically fixed salt tolerant breeding lines with acceptable grain quality having high yield potential with good plant type	Gazipur, Satkhira and Khulna
	6.8 Trait paneling of OYT lines	Assessment of presence/ availability of favorable alleles in breeding lines/population	Out Sourcing
	6.9 Grain quality analysis of OYT, PYT, AYT & RYT lines	To evaluate key economic traits based on consumers preference	BRRI, Gazipur
	6.10 Preliminary Yield Trial (PYT)	Initial yield evaluation of advanced lines compared to standard checks in replicated trial	Gazipur, Satkhira and Khulna
	6.11 Advanced Yield Trial (AYT)	Confirmatory yield evaluation of advanced lines compared to standard checks	Gazipur, Satkhira and Khulna
	6.12 Regional Yield Trial (RYT)/PVS/Adaptive trials	To evaluate specific and general adaptability of the advance breeding lines as compared with standard checks in on-farm condition	Gazipur, Satkhira and Khulna (5-6 locations)
	6.13 ALART	Evaluation of specific and general adaptability of the advanced breeding lines as compared with standard checks under on-station condition	Locations selected by ARD
	Project 6: Development of Salt Tolerant Rice (Boro)		
	6.1 Hybridization	Introgression of salinity tolerant genes in genetically advanced genotypes	BRRI, Gazipur
	6.2 Confirmation of F_1	To confirm the crosses as true hybrid	BRRI, Gazipur
	6.3 Quality check (QC) analysis of F_1s	To confirm the crosses as true hybrid	BRRI, Gazipur
	6.4 FRGA	Generation Advancement	BRRI, Gazipur
	6.5 Line Stage Testing (LST)	Identification of uniform lines based on plant height, flowering date and grain type	Satkhira, Gazipur
	6.6 Observational Yield Trial	Selection of breeding lines with	Gazipur, Satkhira

	(OYT)	strong plant type, uniformity in heading, salinity tolerance in the field condition	and Khulna
	6.7 Trait paneling of OYT lines	Assessment of presence/ availability of favorable alleles in breeding lines/population	Out Sourcing
	6.8 Grain quality analysis of OYT, PYT, AYT & RYT, ALART lines	To evaluate key economic traits based on consumers preference	GQN, BRRI
	6.9 Preliminary Yield Trial (PYT#1 & 2)	Initial yield evaluation of advanced lines compared to standard checks in replicated trial	Gazipur, Satkhira and Khulna
	6.10 Advanced Yield Trial (AYT#1 & 2)	Confirmatory yield evaluation of advanced lines compared to standard checks	Gazipur, Satkhira and Khulna
	6.11 Regional Yield Trial (RYT)/PVS/Adaptive trials	To evaluate specific and general adaptability of the advance breeding lines as compared with standard checks in on-farm condition	Gazipur, Satkhira and Khulna (5-6 locations)
	6.12 ALART#1 & 2	Evaluation of specific and general adaptability of the advanced breeding lines as compared with standard checks under on-station condition	Locations selected by ARD
	6.13 Screening rice germplasm for salinity tolerance	To identify new sources of salinity tolerance	Plant Physiology Division, BRRI
	6.14 Maintenance of parent	Maintenance of parent for future use in the hybridization or in the experiment as check variety	BRRI, Gazipur
7	**Project-7: Development of Premium Quality Rice (PQR) T. Aman**		
	7.1 Hybridization	Introgression of genes of small grain (national & international grade) with aroma and Antioxidant into high yielding rice genetic background	BRRI, Gazipur
	7.2 Confirmation of F_1	To confirm the crosses as true hybrid	BRRI, Gazipur
	7.3 Pedigree nursery	Selection of progenies with improved plant type, earliness, premium quality grain and high yield potential compared to standard varieties	BRRI, Gazipur
	7.4 Observational Yield Trial (OYT)	Selection of genetically fixed lines with fine grain properties having high yield with good plant type	BRRI, Gazipur

	7.5 Preliminary Yield Trial (PYT)	Initial yield evaluation of advanced lines compared to standard checks	BRRI, Gazipur
	7.6 Secondary Yield Trial (SYT)	Secondary yield evaluation of advanced lines compared to standard checks	BRRI, Gazipur
	7.7 Seed Purification and Seed increase of RYT and ALART Materials	Evaluation of some advanced lines along with standard checks	BRRI, Gazipur
	7.8 Regional Yield Trial (RYT-long slender)	i. To select long grain type advanced lines better than Indian long grain type Jira-shail. ii. To evaluate adaptability and fine grain quality of the advance breeding lines compared with standard long grain type check Jira-shail in farmers field	Total 10 locations (3 locations in Nowgaon, 2 in Rajshahi, 3 in Dinajpur and 2 in Kushtia)
	7.9 Regional Yield Trial (RYT-short slender)	i. To select short grain type advanced lines better than Indian short grain type Jira. ii. To evaluate adaptability and fine grain quality of the advance breeding lines compared with standard short grain type Jira as check in farmers field.	Total 10 locations (3 locations in Nowgaon, 2 in Rajshahi, 3 in Dinajpur and 2 in Kushtia)
	7.10 Regional Yield Trial (ALART- very long type)	i. To select very long basmati type advanced lines better than BRRI dhan38. ii. To evaluate adaptability and very long grain basmati type advanced breeding lines compared with long grained BRRI dhan38 in farmers field.	Total 10 locations (3 locations in Nowgaon, 2 in Rajshahi, 3 in Dinajpur and 2 in Kushtia)
	7.11 Maintenance of parents	Maintenance of parent for future use in the hybridization or in the experiment as check variety	BRRI, Gazipur
	Project-7: Development of Premium Quality Rice (PQR) Boro		
	7.1 Hybridization	Introgression of extra-long grain and small grain with or without aroma into high yielding rice genetic background	BRRI, Gazipur
	7.2 Confirmation of F_1	To confirm the crosses as true hybrid	BRRI, Gazipur
	7.3 FRGA	Generation Advancement	BRRI, Gazipur
	7.4 Line Stage Testing (LST)	Identification of uniform lines based on plant height, flowering	Gazipur

		date and grain type	
	7.5 Observational Yield Trial (OYT#1, 2 & 3)	Selection of homogeneous breeding lines with fine grain properties having high yield with good plant type	Gazipur
	7.6 Preliminary Yield Trial (PYT)	Initial yield evaluation of advanced lines compared to standard checks	Gazipur
	7.7 Secondary Yield Trial (SYT#1 & 2)	Secondary yield evaluation of advanced lines compared to standard checks	Gazipur
	7.8 Regional Yield Trial (RYT)	To evaluate specific and general adaptability of the advance breeding lines as compared with standard checks in on-station condition	Total 10 locations
	7.9 Advance Line Adaptive Research Trial (ALART)	On-farm evaluation of advanced breeding lines compared to standard checks for testing their specific and general adaptability	Total 10 locations (selected by ARD)
	7.10 Proposed Variety Trial (PVT)	On-farm evaluation of advance breeding lines compared to standard checks for testing their specific and general adaptability	Total 10 locations (selected by SCA)
	7.11 Re-Proposed Variety Trial (PVT)	On-farm evaluation of advance breeding lines compared to standard checks for testing their specific and general adaptability	Total 10 locations (selected by SCA)
	7.12 Maintenance of parents	Maintenance of parent for future use in the hybridization or in the experiment as check variety	Gazipur
	Project 7a: Development of Photo-sensitive Rice, T. Aman		
	7a.1 Hybridization	Development of strong photo-sensitive (Nizersail type) and medium photo-sensitive (Gainza type) premium quality rice for T. Aman season	Gazipur
	7a.2 Confirmation of F_1	To confirm the crosses as true hybrid	Gazipur
	7a.3 Pedigree nursery	Selection of progenies with improved plant type, earliness, premium quality grain and high yield potential compared to standard varieties	Gazipur
	7a.4 Observational Yield Trial (OYT)	Selection of genetically fixed lines having high yield with	

		photosensitivity	
	7a.5 Preliminary Yield Trial (PYT)	Initial yield evaluation of advanced lines compared to standard checks	Gazipur
	7a.6 Secondary Yield trial (SYT)	To evaluate specific and general adaptability of the advance breeding lines as compared with standard checks in on-station condition	Gazipur
8	**Project 8: Development of Rice Varieties for Favorable Boro Environment**		
	8.1 Hybridization	To create variations for the development of new genotypes with high yield and acceptable grain quality	Gazipur
	8.2 Confirmation of F_1	To confirm the crosses as true F_1s and use of the selected F_1s to produce F_2 seeds and use in making different types of crosses	Gazipur
	8.3 Segregating RGA (F_2-F_6)	Generation Advance	Gazipur
	8.4 Line Stage Testing (LST)	To select uniform genotypes in terms of plant height and days to flowering with key target traits	Gazipur
	8.5 Observational Yield Trial (OYT)	Selection of superior lines with desired agronomic characters	Gazipur, Cumilla, Habiganj, Rangpur
	8.6 Advanced Yield Trial (AYT)	Evaluation of breeding lines for yield potential in multi-locations in replicated trial	Gazipur, Cumilla, Habiganj
	8.7 Regional Yield Trial (RYT#1, 2 & 3)	To evaluate specific and general adaptability of the advance breeding lines as compared with standard checks in on-station condition	Total 9 locations
	8.8 Advance Line Adaptive Research Trial (ALART)	On-farm evaluation of advanced breeding lines compared to standard checks for testing their specific and general adaptability	Total 10 locations (selected by ARD)
	8.9 Estimation of Breeding Values of Elite Irrigated Breeding Pool	To assess the baseline breeding value of the parents used in the breeding program	Gazipur, Cumilla, Habiganj, Rangpur
9	**Project 9: Development of Cold Tolerant Rice**		
	9.1 Hybridization	To create variations for the development of new genotypes with cold tolerance at reproductive and seedling stage with acceptable grain quality	Gazipur
	9.2 Confirmation of F_1	To confirm the crosses as true F_1s	Gazipur

		and use of the selected F_1s to produce F_2 seeds and use in making different types of crosses	
	9.3 Segregating RGA (F_2-F_6)	Generation Advance	Gazipur
	9.4 Line Stage Testing (LST)	To select uniform genotypes in terms of plant height and days to flowering with key target traits	Gazipur
	9.5 Observational Yield Trial (OYT#1) [Cold stress (15 Oct seeding) & non-stress (15 Nov seeding)]	Selection of superior and cold tolerant lines under natural cold condition	Gazipur, Habiganj
	9.6 Observational Yield Trial (OYT#2) [Cold stress (15 Oct seeding) & non-stress (15 Nov seeding)]	Selection of superior and cold tolerant lines under natural cold condition	Gazipur, Habiganj
	9.7 Advanced Yield Trial (AYT)	Evaluation of breeding lines for yield potential in multi-locations in replicated trial	Gazipur, Rajshahi, Rangpur And 3 Haor sites of Habiganj, Kishoreganj and Sunamganj
	9.8 Regional Yield Trial (RYT)	To evaluate specific and general adaptability of the advance breeding lines as compared with standard checks in on-station condition	Gazipur, Rajshahi (3 locs), Rangpur (3 locs), Habiganj (3 locs)
	9.9 Advance Line Adaptive Research Trial (ALART)	On-farm evaluation of advanced breeding lines compared to standard checks for testing their specific and general adaptability	10-12 locations including 6-8 haor sites by Adaptive Research Division
	9.10 Validation of QTLs for spikelet fertility under cold stress	To validation of QTLs for spikelet fertility under cold stress	Gazipur
	9.11 Evaluation IRRI bred breeding lines	Evaluation of breeding lines for yield potential in multi-locations in replicated trial	Habiganj
10	**Project 10: Development for Zinc Enriched Rice, T. Aman**		
	10.1 Hybridization	Development of new genotypes with high zinc and iron content along with resistance to major insect pests and diseases, abiotic stress tolerance and acceptable grain quality	Gazipur
	10.2 Confirmation of F_1	To confirm the crosses as true F_1s and use of the selected F_1s to produce F_2 seeds and in different types of crosses	Gazipur

	10.3 Pedigree nursery	To select progenies with emphasis on modern plant type, large panicle, more grains in panicle, lodging resistance and acceptable grain quality	Gazipur
	10.4 Observational Yield Trial (OYT)	Selection of homogeneous breeding lines with desirable agronomic characters with less or no unproductive tiller, intermediate plant height, short growth duration, acceptable grain quality and high yield potential	Gazipur
	10.5 Preliminary Yield Trial (PYT)	Initial yield evaluation of advanced lines compared to standard checks	Gazipur
	10.6 Secondary Yield Trial (SYT)	Confirmation of yield potentiality of the advanced lines compared to standard checks	Gazipur
	10.7 Regional yield Trial (RYT)	Evaluation of agronomic performance, specific and general adaptability under on station condition	All BRRI R/S and Gazipur
	10.8 Advanced Lines Adaptive Research Trial (ALART)	Evaluation of specific and general adaptability under on farm condition	10 locations (selected by ARD)
	Project 10: Development for Zinc Enriched Rice, Boro		
	10.1 Hybridization	Development of new genotypes with high zinc and iron content along with resistance to major insect pests and diseases, abiotic stress tolerance and acceptable grain quality	Gazipur
	10.2 Confirmation of F_1	To confirm the crosses as true F_1s and use of the selected F_1s to produce F_2 seeds and in different types of crosses	Gazipur
	10.3 Pedigree nursery	To select progenies with emphasis on modern plant type, large panicle, more grains in panicle, lodging resistance and acceptable grain quality	Gazipur
	10.4 Observational Yield Trial (OYT)	Selection of homogeneous breeding lines with desirable agronomic characters with less or no unproductive tiller, intermediate plant height, short	Gazipur

		growth duration, acceptable grain quality and high yield potential	
	10.5 Preliminary Yield Trial (PYT)	Initial yield evaluation of advanced lines compared to standard checks	All BRRI R/S and Gazipur
	10.6 Secondary Yield Trial (SYT)	Confirmation of yield potentiality of the advanced lines compared to standard checks	Gazipur
	10.7 Regional yield Trial (RYT)	Evaluation of agronomic performance, specific and general adaptability under on station condition	Gazipur
11	**Project 11: Development of Insect Resistant Rice (IRR), T. Aman**		
	11.1 Hybridization	Introgression of genes of BPH and gall midge into high yielding rice genetic background	Gazipur
	11.2 Confirmation of F_1	To confirm the crosses as true hybrid	Gazipur
	11.3 Quality check (QC) analysis of F_1s	To confirm the crosses as true hybrid	Gazipur
	11.4 Line Augmentation	Introgression of *bph* genes (*bph17* and *bph32*) to develop advanced breeding lines	Gazipur
	11.5 FRGA	Generation Advance	Gazipur
	11.6 Line Stage Testing (LST)	Identification of uniform lines based on good plant type, flowering date and grain type	Gazipur
	11.7 Observational Yield Trial (OYT)	Selection of genetically fixed breeding lines with resistant to BPH/GM, earliness having high yield with good plant type	Gazipur, Rajshahi, Cumilla
	11.8 Trait paneling of OYT lines	Assessment of presence/availability of favorable alleles in breeding lines/population	Out sourcing
	11.9 Grain quality analysis of OYT & AYT lines	To evaluate key economic traits based on consumers preference	Gazipur
	11.10 Advanced Yield Trial (AYT)	To evaluate/confirm yield performance of the advance breeding lines as compared with standard checks at multi-locations trials	Gazipur, Rajshahi, Cumilla
	11.11 Advanced Line Adaptive Research Trial (ALART)	On-farm evaluation of advance breeding lines compared to standard checks for testing their specific and general adaptability	Sites selected by ARD
	11.12 Screening breeding lines	To identify new sources of BPH	Entomology

	for BPH and GM resistance	and GM resistance	Division, BRRI
	11.13 Maintenance and seed increase of key parents.	To maintain genetic purity of parent materials with seed production	Gazipur
	Project 11: Development of Insect Resistant Rice (IRR), Boro		
	11.1 Hybridization	Introgression of genes of BPH and gall midge into high yielding rice genetic background	Gazipur
	11.2 Confirmation of F_1	To confirm the crosses as true hybrid	Gazipur
	11.3 Quality check (QC) analysis of F_1s	To confirm the crosses as true hybrid	Gazipur
	11.4 Line Augmentation	Introgression of *bph* genes (*bph17* and *bph32*) to develop advanced breeding lines	Gazipur
	11.5 FRGA	Generation Advance	Gazipur
	11.6 Line Stage Testing (LST)	Identification of uniform lines based on good plant type, flowering date and grain type	Gazipur
	11.7 Observational Yield Trial (OYT)	Selection of genetically fixed breeding lines with resistant to BPH/GM, earliness having high yield with good plant type	Gazipur, Rangpur, Cumilla
	11.8 Trait paneling of OYT lines	Assessment of presence/availability of favorable alleles in breeding lines/population	Gazipur
	11.9 Grain quality analysis of OYT, PYT & AYT lines	To evaluate key economic traits based on consumers preference	Out Sourcing
	11.10 Preliminary Yield Trial (PYT)	Initial yield evaluation of advanced lines compared to standard checks	Gazipur, Rangpur, Cumilla
	11.11 Advanced Yield Trial (AYT)	To evaluate/confirm yield performance of the advance breeding lines as compared with standard checks at multi-locations trials	Gazipur, Rangpur, Cumilla
	11.12 Regional yield Trial (RYT)	Evaluation of agronomic performance, specific and general adaptability under on station condition	10 BRRI R/S
	11.13 Screening breeding lines for BPH and GM resistance	To identify new sources of BPH and GM resistance	Entomology Division, BRRI
	11.14 Maintenance and seed increase of key parents.	To maintain genetic purity of parent materials with seed production	Gazipur
12	**Project 12: Development of Disease Resistant Rice (BB, Blast & RTV), T. Aman**		

	12.1 Hybridization	Introgression of high yield, lodging tolerance and disease resistance trait for BB, Blast & RTV	Gazipur
	12.2 F_1 confirmation	To confirm the crosses as true hybrid	Gazipur
	12.3 Segregating population	Advancement of segregating generations following single seed descent-based RGA method	Gazipur
	12.4 Observational Trial (OYT)	Selection of genetically fixed breeding lines with strong plant type, uniformity in heading, good PACP in the field condition and tolerance to disease (BB & Blast) in artificial inoculation condition	Gazipur, Cumilla, Rangpur & Rajshahi
	12.5 Preliminary Yield Trial (PYT#1) (GD <120 days)	Initial yield evaluation of advanced breeding lines in replicated trials for BB resistance with short duration	Gazipur, Cumilla, Rangpur & Rajshahi
	12.6 Preliminary Yield Trial (PYT#2) (GD >120 days)	Initial yield evaluation of advanced breeding lines in replicated trials for BB resistance with medium duration	Gazipur, Cumilla, Rangpur & Rajshahi
	12.7 Multi-location Trial (MLT)	Confirmatory yield evaluation of advanced lines compared to standard checks in different locations	Gazipur, Cumilla (2), Rangpur, Rajshahi, Bogura, Satkhira
	12.8 Maintenance and seed increase of key parents.	To maintain genetic purity of parent materials with seed production	Gazipur
	Project 12: Development of Disease Resistant Rice (BB, Blast & RTV), Boro		
	12.1 Hybridization	Introgression of high yield, lodging tolerance and disease resistance trait for BB & Blast	Gazipur
	12.2 F_1 confirmation	To confirm the crosses as true hybrid	Gazipur
	12.3 Segregating population	Advancement of segregating generations following single seed descent-based RGA method	Gazipur
	12.4 Observational Yield Trial (OYT)	Selection of genetically fixed breeding lines with strong plant type, uniformity in heading, good PACP in the field condition and tolerance to disease (BB & Blast) in artificial inoculation condition	Gazipur, Cumilla, Rangpur & Rajshahi
	12.5 Preliminary Yield Trial	Initial yield evaluation of	Gazipur, Cumilla,

	(PYT#1) (GD <150 days)	advanced breeding lines in replicated trials for BB resistance with short duration	Rangpur & Rajshahi
	12.6 Preliminary Yield Trial (PYT#2) (GD >150 days)	Initial yield evaluation of advanced breeding lines in replicated trials for BB resistance with medium duration	Gazipur, Cumilla, Rangpur & Rajshahi
	12.7 Advanced Yield Trial (AYT#1) (GD <150 days)	To evaluate/confirm yield performance of the advance breeding lines as compared with standard checks at multi-locations trials	Gazipur, Cumilla, Rangpur & Rajshahi
	12.8 Advanced Yield Trial (AYT#2) (GD >150 days)	To evaluate/confirm yield performance of the advance breeding lines as compared with standard checks at multi-locations trials	Gazipur, Cumilla, Rangpur & Rajshahi
	12.9 Regional yield Trial (RYT_GSR)	Evaluation of agronomic performance, specific and general adaptability under on station condition	BRRI R/S
13	**Project 13: Development of Submergence and Water Stagnation Tolerance Rice Varieties**		
	13.1 Hybridization	Introgression of submergence and medium stagnant water tolerant genes into modern genetic background with high yield potential, short/long growth duration, weakly/strongly photoperiod sensitivity, grain quality etc.	Gazipur
	13.2 F_1 confirmation	Confirmation of crosses with introgression of genes for submergence tolerance (particularly *SUB1*) and water stagnation tolerance into improved genetic background	Gazipur
	13.3 Segregating population	Advancement of segregating generations following single seed descent-based RGA techniques	Gazipur
	13.4 Line Stage Testing	Screening of genetically homozygous lines for homogeneity, grain quality, grain yield potential and *SUB1*-specific SNP markers	Gazipur
	13.5 Line Augmentation	Introgression of Sub1 to develop advance lines quickly	Gazipur

	13.6 Observational Yield Trial-1 (SUB)	Initial evaluation of the genotypes with tolerance against controlled submergence, rainfed and flood prone farmers field conditions	Gazipur and Rangpur
	13.7 Preliminary Yield Trial-1 (SUB1)	Preliminary evaluation of yield and survivability of promising breeding lines in replicated trial under controlled submergence and flash flood prone farmers' field.	Gazipur and Rangpur
	13.8 Preliminary Yield Trial-2 (Sub1)	Preliminary evaluation of yield and survivability of promising breeding lines in replicated trial under controlled submergence and flash flood prone farmers' field.	Gazipur and Rangpur
	13.9 Preliminary Yield Trial-3 (SUB)	Preliminary evaluation of yield and survivability of promising breeding lines in replicated trial under controlled submergence and flash flood prone farmers' field.	Gazipur and Rangpur
	13.10 Preliminary Yield Trial-4 (Sub1)	Preliminary evaluation of yield and survivability of promising breeding lines in replicated trial under controlled submergence and flash flood prone farmers' field.	Gazipur
	13.11 Preliminary Yield Trial-5 (Sub1)	Preliminary evaluation of yield and survivability of promising breeding lines in replicated trial under controlled submergence and flash flood prone farmers' field.	Gazipur
	13.12 Preliminary Yield Trial-6 (Sub1)	Preliminary evaluation of yield and survivability of promising breeding lines in replicated trial under controlled submergence and flash flood prone farmers' field.	Gazipur
	13.13 Secondary Yield Trial-1 (Sub)	Secondary evaluation of yield and survivability of promising breeding lines in replicated trial under controlled submergence and flash flood prone farmers' field.	Gazipur
	13.14 Secondary Yield Trial-2 (Sub)	Secondary evaluation of yield and survivability of promising breeding lines in replicated trial under controlled submergence and flash flood prone farmers' field.	Gazipur
	13.15 Advanced Yield Trial (Sub+BB)	Advanced evaluation of yield and survivability of promising	Gazipur and Rangpur

		breeding lines in replicated trial under controlled submergence and flash flood prone farmers' field.	
	13.16 PVS Trial	Evaluation of genotypes in the real submergence and/or medium stagnation prone environments of the farmers' field with the participation of farmers under the management practices of researchers	Gazipur and Rangpur
	13.17 Advanced Line Adaptive Research Trial (ALART)	Evaluation of specific and general adaptability of the advanced breeding lines as compared with standard checks under on-station condition and in the real submergence and/or medium stagnation prone environments of the farmers' field	Locations selected by ARD
	13.18 Investigation on mixed seed samples of BRRI dhan51	To investigate seed purity of BRRI dhan51.	Gazipur
	13.19 Maintenance of submergence and Stagnant flood tolerant genotypes	To ensure seed safety of submergence tolerant genotypes	Gazipur
	13.20 Screening of Core parental material for submergence tolerance	Screening of Core parental material for submergence tolerance	Gazipur
14	**Project 14: Development of Drought Tolerant Rice (T. Aman)**		
	14.1 Hybridization	Introgression of drought tolerance gene into high yielding rice genetic background	Gazipur
	14.2 Confirmation of F_1	To confirm the crosses as true F_1 and use of the selected F_1s to produce F_2 seeds and in different types of crosses	Gazipur
	14.3 Field RGA	Rapid advancement of F_4-F_5 generations through field RGA	Gazipur
	14.4 Line Stage Testing (LST)	Selection of drought tolerant progenies with improved plant type, earliness, acceptable grain quality and high yield potential compared to standard varieties	Gazipur
	14.5 Observational Yield Trial (OYT)	Selection of homogeneous breeding lines with drought tolerant quality having high yield with good plant type	Gazipur (Control), Rajshahi (One location Stress and another Control)
	14.6 Regional Yield Trial (RYT)	Evaluation specific and general	Gazipur, Cumilla,

		adaptability under on-station condition	Satkhira, Kushtia, Rangpur, Rajshahi and Sonagazi
15	**Project 15: Development of Water Saving Rice**		
	15.1 Hybridization	Introgression genes of high yield and water saving	Gazipur
	15.2 F_1 confirmation	To confirm the crosses as true hybrid	Gazipur
	15.3 Segregating population	Advancement of segregating generations following single seed descent-based RGA method	Gazipur
	15.4 Observational Yield Trial (OYT)	Selection of genetically fixed breeding lines with strong plant type, uniformity in heading, good PACP in the field condition	Gazipur
	15.5 Advanced Yield Trial (AYT)	To evaluate/confirm yield performance of the advance breeding lines as compared with standard checks	Gazipur
16	**Project 16: International Network for Genetic Evaluation of Rice (INGER), T. Aman**		
	16.1 International Upland Rice Observational Nursery (IURON)	Sharing germplasm and breeding lines through international platform for the acceleration of rice improvement	Gazipur
	16.2 International Rainfed Lowland Rice Observational Nursery Module 1 (IRLON)-3 set	Sharing germplasm and breeding lines through international platform for the acceleration of rice improvement	Gazipur, Rangpur, Barishal
	16.3 International Rice Soil Stress Tolerance Nursery (IRSSTN) - Module 1 (Coastal salinity, wet season)	Sharing germplasm and breeding lines through international platform for the acceleration of rice improvement	Satkhira
	16.4 International Rice Tungro Nursery (IRTN) -2 sets	Sharing germplasm and breeding lines through international platform for the acceleration of rice improvement	Gazipur
	16.5 International Rice Stem Borer Nursery (IRSBN)- 2 sets	Sharing germplasm and breeding lines through international platform for the acceleration of rice improvement	Gazipur
	16.6 International Rice Bacterial Blight Nursery (IRBBN_-3 sets	Sharing germplasm and breeding lines through international platform for the acceleration of rice improvement	Gazipur
	16.7 International Rice Submergence Tolerance Nursery	Sharing germplasm and breeding lines through international	Gazipur

	for Flood prone environment (IRSTN-FP)	platform for the acceleration of rice improvement	
	Project 16: International Network For Genetic Evaluation of Rice (INGER), Boro		
	16.1 International Irrigated Rice Observational Nursery (IIRON-3 Set)	Sharing germplasm and breeding lines through international platform for the acceleration of rice improvement	Gazipur, Barishal, Habiganj
	16.2 International Rice Soil Stress Tolerance Nursery (IRSSTN) – 1 sets)	Sharing germplasm and breeding lines through international platform for the acceleration of rice improvement	Satkhira
	16.3 International Temperate Rice Observational Nursery (IRTON) -2 sets	Sharing germplasm and breeding lines through international platform for the acceleration of rice improvement	Gazipur, Rangpur
17	**Project 17: Deployment and Validation of High Beta-carotene Rice and High-Iron & Zinc Rice Varieties (Healthier Rice Project), T. Aman**		
	17.1 Hybridization	Introgression of high iron and zinc gene into high yielding rice genetic backgrounds of BRRI dha71, BRRI dhan79 and BRRI dhan81, BRRI dhan87, and BRRI dhan92 and BRRI dhan99	Gazipur
	17.2 Marker Assisted Backcrossing (MABC)	BC_3F_2 generation in the background of BRRI dha48, BRRI dhan67 and BRRI dhan71, and BRRI dhan84, BRRI dhan87 and BRRI dhan89 will be advanced through marker assisted breeding	Gazipur
	17.3 Contained Trial (CT)	To evaluate agronomic and product performance (Vitamin A level) of the advanced introgressed breeding lines under contained trial at screen house condition.	Gazipur
	17.4 Multiplication of selected materials of Contained Trial (CT)	Seed multiplication for Confined Field Trail (CFT)	Gazipur
	Project 17: Deployment and Validation of High Beta-carotene Rice and High-Iron & Zinc Rice Varieties (Healthier Rice Project), Boro		
	17.1 Hybridization	Introgression of high iron and zinc gene into high yielding rice genetic backgrounds of BRRI dha71, BRRI dhan79 and BRRI dhan81, BRRI dhan87, and BRRI dhan92 and BRRI dhan99	Gazipur
	17.2 Marker Assisted	BC_3F_2 generation in the	Gazipur

	Backcrossing (MABC)	background of BRRI dha48, BRRI dhan67 and BRRI dhan71, and BRRI dhan84, BRRI dhan87 and BRRI dhan89 will be advanced through marker assisted breeding	
18	**AGGRi Network Trials for Favorable Environment**		
	18.1 AGGRi Network Trials for Favorable Environment	To identify genetically diverged high breeding value line to leverage in the breeding program	Gazipur, Rajshahi, Cumilla
	18.2 Advanced yield trial (AYT) of AGGRiNet materials	To select superior breeding lines for further advancement	Gazipur, Rajshahi, Cumilla
	18.3 Estimation of breeding value for elite breeding pools of T. Aman ecosystem	To select candidates for deep sequencing	Gazipur, Rajshahi, Rangpur

Biotechnology Division			
	Program Area: VARIETAL DEVELOPMENT		
Sl. No	**Research Title**	**Objectives**	**Location**
1	Development of low glycemic index (GI) rice variety through anther culture.	To generate low glycemic index rice through anther culture	BRRI, Gazipur
2	Development of salt tolerant rice variety through anther culture	To develop salt tolerant rice DH lines through anther culture	BRRI, Gazipur
3	Development of premium quality rice variety through anther culture	To develop premium quality rice DH lines through anther culture	BRRI, Gazipur
4	Development of Aus variety through anther culture	To develop short duration high yield Aus rice variety through anther culture	BRRI, Gazipur
5	Development of antioxidant enriched black rice variety through anther culture	To develop antioxidant enriched high yielding black rice	BRRI, Gazipur
6	Effect of hormone on plant regeneration of rice genotypes	to observe the effect of day on calli production and regeneration	BRRI, Gazipur
7	Effect of incubation days on callus induction and plant regeneration of rice genotypes	To create somaclonal variation towards development of high yielding rice varieties	BRRI, Gazipur
8	Development of High yielding variety	To create somaclonal variation towards development of high yieldingrice varieties	BRRI, Gazipur
9	Development of somaclone using EMS treaded rice seed	To develop modern rice varieties for Aus and T. Aman	BRRI, Gazipur

10	Improvement of BRRI dhan47 through somclonal variation	To create somaclonal variation for reducing seed shattering of BRRI dhan47.	BRRI, Gazipur
11	Development of antioxidant enriched black rice variety through somaclonal variation	To create somaclonal variation for development of antioxidant enriched high yielding modern rice varieties	BRRI, Gazipur
12	Development of rice variety through wide hybridization followed by embryo rescue	To develop high yielding variety through wide hybridization followed by embryo rescue technique.	BRRI, Gazipur
13	Development of high yielding photosensitive rice variety through anther culture	To develop photosensitive rice variety	BRRI, Gazipur
14	Development of premium quality rice (kalijira type) through somaclonal variation	To develop high yielding short stature aromatic Kilizira type varieties	BRRI, Gazipur
15	Identification of QTLs for taller seedling height	To identify QTLs for taller seedling height for developing tidal submergence tolerant rice variety	BRRI, Gazipur
16	Studies Study on Kernel Elongation of Rice	To develop long slender rice variety with high kernel elongation (>1.7)	BRRI, Gazipur
17	Marker assisted selection for fragrance in F_4 Population of BRRI dhan87 and Kalijira.	To develop high yielding aromatic rice	BRRI, Gazipur
18	Marker assisted selection for aromatic and submergence tolerance rice genotype	To develop high yielding submergence tolerant aromatic rice variety	BRRI, Gazipur
19	Development of salt tolerant transgenic rice	To develop salt tolerant transgenic rice lines	BRRI, Gazipur
20	Introgression of salt tolerant mangrove gene	To develop salt tolerance transgenic rice lines	BRRI, Gazipur
21	Development of salt tolerant transgenic rice with *PVA1*	To develop salt tolerant transgenic rice lines	BRRI, Gazipur
22	Development of high yielding aromatic rice lines through genome editing	To develop high yielding aromatic rice lines using CRISPR-Cas9 technology.	BRRI, Gazipur
23	Development of high yielding blast resistant rice lines through genome editing	To develop high yielding blast resistant lines using CRISPR-Cas9 technology.	BRRI, Gazipur

24	Isolation and cloning of stress tolerant gene from Wheat	Isolate and cloning of drought tolerance gene	BRRI, Gazipur
25	Development of variants using NMU of BRH-11-9-11-4-5B having reduced sterility	To reduced sterility of BRH-11-9-11-4-5B(CN6)	BRRI, Gazipur
26	Development of Kilijira type rice variety through mutation by NMU	To develop high yielding short stature aromatic Kilizira type varieties	BRRI, Gazipur
27	Development of Premium Quality Rice through Mutation by EMS (Ethyle Methanesulfonate)	To develop high yielding, short stature aromatic rice lines	BRRI, Gazipur
28	Development of high yielding sheath blight resistant rice variety	To develop Sheath Blight resistant lines	BRRI, Gazipur
29	Identification of major regulators for C4 rice	Characterizing *Setaria italica* mutant population for loss of C4 functions	BRRI, Gazipur

Genetic Resources and Seed Division			
	Program Area: VARIETAL DEVELOPMENT		
Sl. No	**Research Title**	**Objectives**	**Location**
1	**Project 01: Rice Germplasm Conservation and Management**		
1.1	Collection of rice (*Oryzasativa* L.) germplasm.	To collect cultivated and wild rice germplasm from unexplored areas of Bangladesh and to store the collected rice germplasm for different users.	All over the country
1.2	Rejuvenation and conservation of rice germplasm.	To rejuvenate the Genebank accessions with fresh stock and to register the new collection by giving BRRI Genebank accession number after cross checking the duplication.	BRRI, Gazipur
1.3	Rice germplasm supply and exchange.	i. To provide/supply rice germplasm accessions from BRRI Genebank to different divisions of BRRI for screening	GRSD, BRRI, Gazipur

		against biotic and abiotic stresses. ii. To share germplasm to researchers from home and abroad with prescribed MTA for rice improvement.	
1.4	Morphological characterization of rice germplasm.	To characterize rice germplasm as per BRRI prescribed "Germplasm Descriptors and Evaluation Form" as developed from biodiversity international and UPOV convention.	BRRI, Gazipur
1.5	Documentation of rice germplasm.	To document the characterized rice germplasm through morpho-physiological data, digital photo, leaflet and to develop a computer database documentation system for different users.	GRSD, Gazipur
1.6	Molecular characterization of rice germplasm.	To characterize the rice germplasm through molecular tools (DNA Fingerprinting).	Mol. Lab, GRSD, BRRI
2	**Project 02: Exploratory and Genetic Studies**		
2.1	Regional Yield Trial (RYT) of Balam and Jesso-Balam rice germplasm of southern region.	To confirm the yield potentiality of the popular rice germplasm of southern region (Balam and Jesso-Balam) of Bangladesh by comparing with standard checks.	BRRI, Gazipur and BRRI R/S, Barishal
2.2	Regional Yield Trial (RYT) of Sada Mota and Lal Mota rice germplasm of southern region.	To confirm the yield potentiality of the popular rice germplasm of southern region (Sada Mota and Lal Mota) of Bangladesh by comparing with standard checks.	BRRI, Gazipur and BRRI R/S, Barishal
2.3	Selection of superior genotypes from T. Aman/ Boro rice germplasm based on agro-morphological traits.	To identify rice germplasm with higher total biomass yield and higher phenotypic acceptance.	BRRI, Gazipur
2.4	Secondary Yield Trial (SYT) of aromatic rice germplasm.	To evaluate the yield performance of ten aromatic rice germplasms compared to standard check.	BRRI, Gazipur
2.5	DNA Finger printing of rice	To characterize the Kalijira rice germplasm accessions through	Molecular Lab, GRSD, BRRI,

	germplasm (Continued).	molecular tools (DNA Fingerprinting).	Gazipur
2.6	Evaluation of photosensitive rice germplasm collected from Northern districts of Bangladesh.	To identify rice germplasm suitable for late transplanting after flood in Northern region of Bangladesh (Bogura, Kurigram, Lalmonirhat, Gaibandha, Rangpur and Jamalpur).	BRRI, Gazipur
2.7	On-farm conservation of local rice germplasm.	To demonstrate the local rice diversity to the farmers of Rangpur and Sonagazi and to identify the superior germplasm through farmer's selection with reason.	BRRI, Rangpur, Faridpur regions and Sonagazi
2.8	Characterization of similar named groups of rice germplasm.	To characterize and evaluate the similar named Banshful and Rata groups of rice germplasm accessions through quantitative and qualitative traits for developing their core collections.	BRRI, Gazipur
2.9	Secondary Yield Trial (SYT) of Jirasail genotype.	To evaluate the initial yield performance of popular Jirasail germplasm for comparing with standard check.	BRRI, Gazipur
2.10	Molecular characterization of pigmented rice germplasm.	To characterize pigmented rice germplasm using SSR markers.	BRRI, Gazipur
2.11	Secondary Yield Trial (SYT) of Jhum rice landraces.	To evaluate the initial yield performance and other agronomic characteristics of selected popular Jhum rice landraces.	BRRI, Gazipur
2.12	Identification and selection of Sticky rice from Jhum rice germplasm.	To identify and to study the selection criteria for developing sticky rice varieties from Jhum rice germplasm.	BRRI, Gazipur
2.13	Genetic fingerprinting of resistant or moderately resistant germplasm from blast screening using microsattelite DNA markers.	To conform the blast resistant gene(s) in the selected genotypes.	BRRI, Gazipur

2.14	Conformation of selected blast resistant materials using differential blast isolates and molecular markers.	To be conform the resistance of the selected genotypes.	BRRI, Gazipur
2.15	DNA Fingerprinting of latest BRRI varieties.	To characterize the latest BRRI varieties through molecular tools (DNA Fingerprinting).	Molecular Lab, GRSD, BRRI.
3	**Project 3. Seed Production and Variety Maintenance**		
3.1	Nucleus seed production.	To maintain genetic purity and homogeneity of morphological characteristics of BRRI developed rice varieties as a source of breeder seed.	BRRI, Gazipur
3.2	Maintenance of BRRI recommended HYVs and LIVs.	To maintain the BRRI recommended HYVs (High Yielding Variety) and LIVs (Locally Improved Variety) for encouraging farmers to cultivate and for any other purpose.	BRRI, Gazipur
3.3	Breeder seed production and distribution.	To produce and supply of breeder seed (BS) of BRRI developed rice varieties as per indent of GO, NGOs and PS seed producing organizations/companies/entrepreneurs.	BRRI, Gazipur and all BRRI R/S including Sirajganj, Gopalganj and Kustia
3.4	Sending *khudebarta* (SMS) for Breeder Seed Distribution.	To make it easy for our clients to get the information of BS distribution.	BRRI, Gazipur
3.5	Monitoring of breeder seed production farms.	To visit breeder seed plots of BRRI regional stations at flowering and maturity stages for ensuring the quality of produced seed as BS standard.	Breeder seed producing plots at eleven BRRI R/S
3.6	Monitoring of foundation seed production farms.	To visit foundation seed (FS) plots of seed producing agencies at flowering and maturity stages for improving the quality of produced seed as FS standard by sharing experiences.	GO, NGOs and Private Seed Producing Farms

3.7	Effect of regional variation of weather parameters, cultural management, post-harvest processing and seed storage on seed quality of BRRI dhan89.	i. To determine viable period of seed in different storage. ii. To determine speed of germination and germination percentage.	BRRI, Gazipur
3.8	Dormancy and storage ability of newly released BRRI rice varieties.	To find out dormancy duration and storage ability of newly released BRRI rice varieties (after BRRI dhan64) during storage.	BRRI, Gazipur
4	**Project 04: Seed Technology Packages.**		
4.1	Publication on seed production technology package.	To make seed technology knowledge available to the growers by preparing leaflet on seed production techniques for BRRI Rice Seed Network partners.	BRRI, Gazipur
4.2	Digital rice herbarium.	To easily identify difference between different BRRI variety in a look.	BRRI, Gazipur

Hybrid Rice Division			
	Program Area: VARIETAL DEVELOPMENT		
Sl. No	**Research Title**	**Objectives**	**Location**
	Material Development		
1	Source nursery elite lines	Identification of prospective maintainers and restorers from diverse genetic origin & NPT background	BRRI, Gazipur
2	Source nursery restorer lines	Identification of prospective restorers for making experimental rice hybrids	BRRI, Gazipur
3	Source nursery CMS lines	Evaluation of locally developed and exotic CMS lines with their corresponding B lines	BRRI, Gazipur
4	Test cross nursery	Confirmation of B and R from the crossed entries, selection of heterotic rice hybrids and conversion of prospective materials into new CMS lines	BRRI, Gazipur
5	Back cross nursery	Developing CMS lines from identified maintainer by back	BRRI, Gazipur

		crossing.	
6	CMS maintenance and evaluation nursery	Maintain and evaluate of CMS and maintainer lines	BRRI, Gazipur
7	Field Rapid Generation Advance (FRGA) for B and R line improvement	Quick fix up population with target genes	BRRI, Gazipur
8	Generation advancement in segregating lines of Fatema dhan	Homozygous line development in the BG of NPT	BRRI, Gazipur
9	Blast tolerant hybrid rice parental lines development	Quick fix up population with target genes for blast tolerant parental lines development	BRRI, Gazipur
10	submergence tolerant hybrid rice parental lines development	submergence tolerant parental lines development	BRRI, Gazipur
11	Parental lines development for premium quality hybrid rice development	Parental lines development with premium and/or aroma	BRRI, Gazipur
12	Breeding fot outcrossing potentials in CMS lines	To select best CMS lines for enhancing seed production of hybrid rice	BRRI, Gazipur
13	Identification of M and R using home and exotic materials	Identification of prospective maintainers and restorers	BRRI, Gazipur
14	Generation advancement in segregating lines of Fatema dhan	Homozygous line development in the BG of NPT	BRRI, Gazipur
	Evaluation parental lines and hybrid		
15	Observational Trials (OT)	Selection of promising hybrids	BRRI, Gazipur
16	Evaluation of experimental hybrids	Evaluation of test hybrids with 3 checks	BRRI, Gazipur
17	PYT	To study the wider adaptability and yield potentiality of promising hybrids	BRRI, Gazipur
18	MLT (Gazipur + Ishardi + Barisal + Rangpur) (2 sets)	To study the yield potentiality of promising hybrids at farmers field	BRRI, Gazipur
19	Demonstration trials	To assess yield performance of BRRI developed hybrids	BRRI, Gazipur

20	MST HRDC	Identification of prospective maintainers and restorers from MST materials.	BRRI, Gazipur
21	PBM HRDC	Identifying promising maintainer or restorer lines through GCA and SCA.	BRRI, Gazipur
22	Assesment of specific and general adaptability for selection of suitable rice hybrids under saline prone areas	Selection of promising hybrids for saline prone areas	BRRI, Gazipur
	CMS and restorer lines multiplication and F_1 seed production		
23	Multiplication of released hybrid restorer lines	To produce sufficient quantity of restorer line seeds	BRRI, Gazipur
24	CMS lines multiplication of BRRI hybrid dhan3, BRRI hybrid dhan4, BRRI hybrid dhan5, BRRI hybrid dhan6 and BRRI hybrid dhan7	To produce pure and good quality seed of released all BRRI hybrid varieties for subsequent use.	BRRI, Gazipur
25	CMS lines multiplication of upcoming BRRI hybrid dhan8	To produce pure and good quality seed of upcoming BRRI hybrid dhan8 for subsequent use.	BRRI, Gazipur
26	Multiplication of promising CMS lines	Production of sufficient quantity quality seeds of CMS lines for subsequent use	BRRI, Gazipur
27	F_1 seed production of BRRI hybrid dhan5 BRRI hybrid dhan3, BRRI hybrid dhan4, BRRI hybrid dhan5, BRRI hybrid dhan6 and BRRI hybrid dhan7	Production of sufficient quantity quality seeds of BRRI released hybrids for farmers and other stake holder use	BRRI, Gazipur
28	SCA trial Boro (2021-22)	To identify promising hybrids from home and abroad	BRRI, Gazipur

Grain Quality and Nutrition Division

	Program Area: VARIETAL DEVELOPMENT		
Sl. No	**Research Title**	**Objectives**	**Location**
1	Determination of physicochemical and cooking properties of advanced breeding lines (Continue)	To help to develop data base on physicochemical, cooking and eating qualities of grain for newly developed breeding lines	GQN Lab, Gazipur
2	Determination of physicochemical and cooking properties of transforming rice breeding lines (Continue)	To find out the physicochemical and eating quality of promising lines for identifying better grain quality	GQN Lab, Gazipur
3	Evaluation of physicochemical properties of newly released BRRI varieties (Continue)	To determine physicochemical and cooking qualities of BRRI developed rice varieties for updating the database	GQN Lab, Gazipur
4	Nutraceutical Characterization of newly released BRRI varieties (Continue)	To determine nutraceutical properties including antioxidants, minerals, fatty acid and amino acid profiling's of BRRI released HYVs from BR1 to BRRI dhan100 and BRRI hybrid1 to BRRI hybrid dhan7 along with their physicochemical and cooking properties	GQN Lab, Gazipur
5	Calibration of NIR to predict proximate composition of rice varieties (Continue)	i. To calibrate a near accurate prediction model for proximate composition of rice ii. To characterizing the proximate composition (moisture, carbohydrate, protein, lipids, ash and Dietary fiber) of BRRI varieties as an index of nutritional worth	GQN Lab, Gazipur
6	To Screening, Selection, and Training of Sensory Panelists (Continue)	i. To determine impairment of primary senses (color, vision, ageusia and anosmia) ii. To matching test for taste and odor substances iii. To ability to detect basic taste and odor acuity	GQN Lab, Gazipur

		iv. To determine ability to characterize texture v. To performance in comparison with other candidates vi. To increase sensory acuity of panelists and provide them with rudimentary knowledge of procedures used in sensory evaluation	
7	A survey of rice grain quality in Bangladesh: Consumer preference (Continue)	To identify scientific reasons of preferring local varieties over HYV in terms of grain quality and nutrition	All over the country
8	Analysis of ferulic acid (FA) in RBO of Bangladeshi rice varieties in association of biochemical evaluation on burning effects of RBO in vivo rat experiment (Continue)	i. To evaluate on appropriate analysis methodology and study amount of FA and their relation to nutrition properties in rice ii. To evaluate the burning effects of RBO	GQN Lab, Gazipur
9	A study on the different components of rice in relation to the palatability (Continue)	To identify the components of rice grain through comparison of different parameters of rice samples that are responsible for palatability	GQN Lab, Gazipur
10	Fatty acid profiles and nutritional quality of rice bran oil (RBO) in BRRI high yielding varieties (Continue)	i. To identify the varieties containing higher amount of oil content ii. To analyze the fatty acid profile, heavy metal and nutritional value of rice bran oil	GQN Lab, Gazipur
11	The effect of fermentation on the nutritional and microbial changes in Pantha bhat (New)	i. To evaluate the nutritional properties of Pantha bhat ii. To determine the starch digestibility and bioavailability of mineral content iii. To evaluate the microbial properties and beneficial effect of pantha bhat	GQN Lab, Gazipur

12	Study on anti-oxidative and anti-cancer properties of pigmented (black, red, purple) rice varieties in Bangladesh (Continue)	i. Anti-diabetic effects by measuring serum glucose and insulin levels in type 2 diabetic rats ii. Anti-inflammatory effects by estimating serum levels of IL-4, IL-6 and TGF-beta	GQN Lab, Gazipur
13	Development and validation of an HPLC methods for detection of bioactive compounds and residues of common herbicides and pesticide in rice grain (Continue)	To detect bioactive compounds and residues of common herbicides and pesticide in rice grain	GQN Lab
14	Effect of Zn and phytate activities on Zn enriched rice varieties at different locations in T. Aman season (Continue)	To determine the Zn and phytate activities with physicochemical properties of Zn enriched rice varieties at different locations in T. Aman season	BRRI rice field/GQN Lab
15	Assessment of heavy metals (Cd, Zn, Pb, Cr, As) in soil, water, and rice grain from industrial area (Dhaka, Gazipur, Narayangonj, Mymensingh, Narshindi etc.) (continue)	i. To quantify heavy metals in soil, water, and rice grain ii. To identify area of rice field contaminated by industrial effluent water	GQN Lab, Gazipur
16	Proximate analysis of Swietenia Mahagoni, Neem, and Bishkatali oil and its efficacy on insect pest of rice. (continue)	i. To extract crude-extract and isolate Alkaloid from Mahagoni, Neem and Bishkatali as well as their efficacy on rice insect pest. ii. To determine and quantify the active ingredients in Mahagoni, Neem and Bishkatali oil.	GQN Lab, Gazipur
17	Determination of physicochemical properties and nutritional quality of puffed, popped and flattened rice from newly released BRRI varieties (Continue)	i. To identify the physical quality of puffed, popped and flattened rice ii. To determine the nutritional value and heavy metals in puffed, popped and flattened rice	GQN Lab, Gazipur
18	Survey on indigenous rice products of BRRI modern	To find out the popular BRRI varieties are used for producing	All over the country

	varieties (Continue)	puffed popped and flattened rice	
19	Application of remote sensing in rice agriculture (Continue)	i. To monitor crops at different growth stages ii. To ensure effective crop management iii. To validate precision agriculture in rice cultivation	BRRI rice field/GQN Lab

Agronomy Division			
	Program Area: CROP SOIL WATER MANAGEMENT		
Sl. No	**Research Title**	**Objectives**	**Location**
1.	Alleviation of salt stress in rice by exogenousphytoprotectants: regulation of Na^+/K^+ homeostasis and oxidative metabolism	i. To identify the effective phytoprotectant in mitigating salt stress of rice ii. To explore the effect of exogenous phytoprotectants on plant phenotype under salt stress iii. To assess theregulatory mechanisms of phytoprotectants inalleviating salt stress	BRRI, Gazipur
2.	Determination of optimum seedling age for maximize grain yield of BRRI hybrid dhan7	To find out optimum seedling age of BRRI hybrid dhan7	BRRI, Gazipur
3.	Enhancing rice yield by optimizing planting time of newly released transplanted Aman varieties	i.To determine the effect of variable planting time on the phenology, growth and yield of newly released transplanted Aman varieties. ii.To find out optimum time of planting for newly released transplanted Aman varieties.	BRRI, Gazipur
4.	Effect of time of planting on growth, yield and yield contributing factors of BRRI released varieties in Boro season at Haor region of Bangladesh	i.To identify the suitable time of planting and variety for Haor area. ii.To recommend appropriate high yielding variety for Haor area.	R/S, Habijong, BRRI
5.	Effect of time of planting on growth and yield of ALART, RLRlines in Aman season	To determine suitable time of planting and selection of genotypes having high yield	BRRI, Gazipur

		potential for ALART, RLR materials.	
6.	Effect of time of planting on growth and yield of ALART, ZER lines in T.Aman season	To determine suitable time of planting and selection of genotypes having high yield potential for ALART, ZER materials.	BRRI, Gazipur
7.	Effect of time of planting on growth and yield of ALART, PQR in Boro season	To determine suitable time of planting and selection of genotypes having high yield potential.	BRRI, Gazipur
8.	Effect of time of planting on growth and yield of ALART, ZER in Boro season	To determine suitable time of planting and selection of genotypes having high yield potential.	BRRI, Gazipur
9.	Effect of time of planting on growth and grain yield of popular Aus varieties	To determine optimum time of planting of BR26, BRRI dhan48 and BRRI dhan82 at Gazipur.	BRRI, Gazipur
10.	Growth, yield,nutrient use efficiencies and economics of rice transplanter cum fertilizer deep placement machine	i. To determine Growth, yield, nutrient use efficiencies and economics ofrice transplanter cum fertilizer deep placement machine. ii. To compare rice yield and profitability of rice transplantercum fertilizer deep placement machine with traditional transplanting and fertilizer management.	BRRI, Gazipur
11.	Effect of N levels and growth stagebased N application on growth, yield and nitrogen use efficiency of BRRI dhan92 and BRRI dhan96	i. To find out the influence of growth stagebased nitrogen application on growth and yield of rice. ii. To find out optimum N rate and N uptake in grain and straw.	BRRI, Gazipur
12.	Influence of organic source of nutrients on Nitrogen mineralization, microbial population and grain yield of rice	i. To investigate the effect of integrated nutrient management in N mineralization. ii. To determine the microbial population in different nutrient management. iii. To find out the best organic material management practice to	BRRI, Gazipur

		improve soil health and rice yield.	
13.	Application of Nano-Zinc Oxide to Improve Salt Tolerance in Rice	i. To develop an eco-friendly protocol to synthesis Nano-Zinc Oxide. ii. To investigate the effect of Nano-Zinc Oxide on growth, yield and mineral status of rice under salinity stress.	BRRI, Gazipur
14.	Improving nutrient uptake, nitrogen-use efficiency and yield of rice through application of neem coated urea (On going)	i. To determine the nitrogen use efficiency as influenced by neem coated urea compared to prilled urea. ii. To find out the influence of neem coated urea on the grain nutrient (NPK) uptake, growth and yield of transplanted rice.	BRRI, Gazipur
15.	Nitrogen management and scheduling for BRRI hybrid dhan7	i. To find out the amount of N needed for maximum grain yield and to determine economic fertilizer rate of BRRI hybriddhan7. ii. To find out the best N scheduling for BRRI hybrid dhan7.	BRRI, Gazipur
16.	Growth and yield improvement of transplanted Aman rice in Charland ecosystem through integrated nutrient management	To determine an economically suitable fertilizer management option for better growth and yield of rice in Charland ecosystem.	BRRI, Gazipur
17.	Mitigation of waterlogging stress in Boro rice through application of plant protectant along with balanced fertilization	To determine the effect of combined application of fertilizer and plant protectants on the growth, yield and nutrient uptake of waterlogging Boro rice.	BRRI, Gazipur
18.	Nitrogen application to maximize grain yield of swarna type varieties in T. Aman season	i. To find out optimum nitrogen rate for swarna type varieties. ii. To find out the influence of nitrogen application on the grain N uptake, growth and yield of swarna type varieties.	BRRI, Gazipur
19.	Determination of optimum Nitrogen rate for popular transplanted Aus rice varieties	To determine optimum fertilizer rate for maximum grain yield of popular Aus varieties of BR26, BRRI dhan48 and BRRI dhan82	BRRI, Gazipur

		and to establish the relationship of N uptake in grain and grain yield of Aus rice.	
20.	Reduce Weed Seed Bank by long-term fellow management and herbicide uses in Rice- rice Cropping System	i.To assess the total number of weed seeds reserve, species composition and dominant weed species present as well as to compare the floristic diversity of soil weed seedbank in rice field. ii.To reduce weed seed reservoir through fellow management in different soil depth.	BRRI, Gazipur
21.	Qualitative and quantitate measurement of allelochemicals by HPLC or LCMS/MS method	i. To isolate, identify and measurement of allelochemicals from rice. ii. To identify suitable rice varieties with allelopathic potentiality for anenhancing agricultural productivity and income for farmers. iii. To reduce the use of herbicide for ensuring safer climate.	BRRI, Gazipur
22.	Study on biodegradation of soil-applied herbicides in soil using selected microbial strain	i. To investigate the effect of herbicide on bacterial survivability in soil. ii. To investigate the role of bacteria on degradation of soil applied pesticides.	BRRI, Gazipur
23.	Residue analysis of widely used herbicides in the irrigated rice ecosystem	i. To validate of high-performance liquid chromatographic protocol for the determination of herbicide residues. ii. To determine the residue of pre-emergence and post-emergence herbicides in the irrigation water, soil, rice straw and grain.	BRRI, Gazipur
24.	Screening of rice varieties for weed competitiveness	To select weed competitive rice variety.	BRRI, Gazipur
25.	Evaluation of candidate herbicides	To find out the efficacy of new herbicides.	BRRI, Gazipur
26.	Allelopathic effect of rice	To screen out highly allelopathic	BRRI, Gazipur

	varieties for weed management	variety of rice.	
27.	Residue analysis of widely used herbicides in the irrigated rice ecosystem	To determine the residue of pre-emergence and post-emergence herbicides in the irrigation water, soil, rice straw and grain.	BRRI, Gazipur
28.	Herbicide Application: Shifts in soil microbial community structure	i. To characterize the herbicide-induced responses of microorganisms in transplanted rice. ii. To evaluate the herbicide-induced tolerance of soil microbes.	BRRI, Gazipur
29.	Yield maximization of Boro rice through good agricultural practices (GAPs)	To observe growth and yield of Boro rice to reduce production cost, by minimum use of inputs.	BRRI, Gazipur
30.	Yield Maximization of BRRI developed rice varieties through influencing some Agronomic Critical Factors in Boro seasons	i. To study the effect of Agronomic most critical factors for yield maximization of newly BRRI developed varieties. ii. To find out and recommended the most appropriate Agronomic critical factors packages for yield maximization of newly BRRI developed varieties.	BRRI, Gazipur
31.	Maximizing yield and quality of some local fine aromatic cultivars through influencing some Agronomic management in Aman seasons	i. To study the effect of some Agronomic managements for yield maximization of some local fine aromatic popular varieties. ii. To find out and recommended the most appropriate Agronomic management packages for yield maximization and quality improvement of some local fine aromatic popular varieties.	BRRI, Gazipur
32.	Toxic heavy metal bioaccumulation in rice cultivated in soil and water contaminated with industrial waste	i. To quantify the physico-chemical parameters of soil and water contaminated with industrial waste. ii. To determine the transfer of toxic heavy metals from contaminated soils and water into rice straw and grain.	BRRI, Gazipur

33.	Improvement of soil health in four crops pattern through agronomic management	i. To improve the soil health. ii. To increase the cropping intensity and productivity.	BRRI, Gazipur
34.	Effect of some agronomic factors for maximizing yield (10t/ha) of long duration BRRI variety (BRRI dhan92) through developing production management protocol	i. To study some agronomic factors for high yield contribution of long duration BRRI variety (BRRI dhan92) in Boro season ii. To find out the best production management protocol for sustainable higher yield of long duration BRRI variety (BRRI dhan92).	BRRI, Gazipur
35.	Effect of some agronomic factors for maximizing yield (7 t/ha) of medium long duration BRRI variety (BRRI dhan94) through developing production management protocol	i. To study some agronomic factors for high yield contribution of long duration BRRI variety (BRRI dhan94) in T Aman season ii. To find out the best production management protocol for sustainable higher yield of medium duration T Aman BRRI variety (BRRI dhan94).	BRRI, Gazipur

Soil Science Division			
	Program Area: CROP SOIL WATER MANAGEMENT		
Sl. No	**Research Title**	**Objectives**	**Location**
1	Increase N use efficiency through nanotechnology and zeolite amendment	To assess N use efficiency by urea-HA nanohybrid and urea plus natural zeolite over prilled urea	BRRI Gazipur
2	Nutrient management for growing four crops in a year	i. To increase crop production ii. To maintain soil fertility and improve nutrient use-efficiency. iii. To determine nutrient depletion/mining	BRRI Gazipur
3	Management interventions to improve NUE and reduce N losses in typical rice cropping	i.To quantify the fate of N fertiliser (crop, soil and losses) and NUE under various N	BRRI Gazipur

	system of Bangladesh	managements for double rice cropping. ii.To develop locally based mitigation options that can be compared with in plot-based experiments.	
4	Determination of N fertilizer doses for ZER-ALART materials	To determine optimum N doses for ZER-ALART materials	BRRI Gazipur
5	Fertilizer determination of PQR-ALART materials	To determine optimum N doses for PQR-ALART materials	BRRI Gazipur
6	Nitrogen response to ALART materials of Disease Resistant Rice (DRR) of Bacterial Blight (BB)	To find out the optimum doses of N for Bacterial Blight ALART materials	BRRI, Gazipur
7	Determination of N fertilizer doses for new BRRI varieties	To determine optimum N doses newly released BRRI varieties.	BRRI Gazipur
8	Effect of nitrogen and potassium rates on modern rice cultivation	i.To find out the suitable combination of N and K for MV rice cultivation ii.To study the N and K dynamics in soil and plant.	BRRI Gazipur
9	Screening of N use efficient rice genotypes	i.To find the N use efficient genotypes ii.To find the agronomic traits related to efficient N management iii.GWA mapping of selected NUE lines	BRRI Gazipur
10	Effect of long-term rice farming on the changes of soil nutrient status of BRRI Farm soil	i.To determine the changes occurred in soil carbon and plant nutrient status in BRRI farm soil due to long-term rice farming ii.To develop a fertility map of the soils of the study area iii.To devise a nutrient dynamics model to estimate the nutrient status on long-term basis	BRRI Gazipur
11	Regional Yield Maximization Trial under Recommended Management Practices	i.To validate integrated improved management practices (IIMP) compared with BRRI recommendation practices ii.To maximize proper filling of grains in a panicle under IIMP	BRRI, Gazipur
12	Response of Rice to Potassium in Rice-based Cropping Pattern	i.To maximize yield of rice-based cropping pattern	HSTU farm,

	in Old Himalayan Piedmont Soil	ii.To identify nutrient mining of soil (especially K) iii.To maintain soil fertility	Dinajpur
13	Soil profile study of the research farms of different BRRI Regional stations	i.To characterize the soils of the research fields of the BRRI Regional stations; ii. To classify the soils according to the world soil classification system. iii.To identify the soil fertility capability classification	BRRI Gazipur and BRRI Barisal
14	Long-term effect of organic and inorganic nutrients on yield and yield trend of lowland rice	i.To evaluate changes in soil physical, chemical and biological properties ii.To determine management options for solution of soil problem(s)	BRRI, Gazipur
15	Long-term missing element trial at BRRI regional stations	i.To determine nutrient mining problem on soil fertility and its influence on rice yield ii.To find out nutrient management options for correcting soil problems	BRRI R/S Rangpur, Rajshahi, Cumilla, Habiganj, Barisal & Satkhira
16	Evaluation of BRRI rice varieties under P deficient soil	To evaluate the rice varieties under P deficient soil	BRRI, Gazipur
17	Phosphorus response study of newly released rice varieties	i.To investigate the performance of MV rice under deficient soil P levels ii.To develop P response curve for respective rice variety	BRRI, Gazipur
18	Consequences of continuous wetland rice cropping on rice yield and soil health	i.To evaluate soil fertility and rice yield changes over time ii.To find out mitigation options of soil health	BRRI, Gazipur
19	Determination of Critical Limit of Nutrients for Major Soils and Crops	i.To delineate of the present status of different nutrients in soils of AEZ 18, 19 and 20 ii.To determine the critical limit of P, K, S and Zn for different soils and rice crop	BRRI Gazipur and AEZ 18, 19 & 20
20	Integrated nutrient management for double and triple rice cropping for maximizing productivity	To improve land productivity and soil health under intensive cropping system.	BRRI, Gazipur

21	Increase rice yield through organic and inorganic amendment	To study the effect of vermicompost and silicon on rice grain yield while maintaining soil health	BRRI, Gazipur
22	Soil management to maximize the yield of newly released rice varieties	To maximize rice yield through organic and inorganic amendments while maintaining soil health in BRRI farm	BRRI, Gazipur and all R/S, BRRI.
23	Effects of long-term rice cultivation with organic amendments on soil quality	i.To observe the changes in soil quality indicators due to rice cultivation for long term rice cultivation with organic manure ii.To assess the potential of the amended soils to sustain the yield level of rice	BRRI, Gazipur
24	Nutrient management under conservation agriculture in double rice cropping system at AEZ 26	To identify the nutrient requirement of crop and to improve soil health under CA practice in Boro-Fallow-T. Aman cropping pattern.	BRRI R/S, Rajshahi
25	Increase Rice Yield through Vermicompost in Coastal Land	To assess the impact of vermicompost on the yield of rice in coastal saline soil	Khulna and Barguna
26	Effect of biochar on rice yield and soil health on problem soils	i.Optimum rate of biochar for rice cultivation in charland soil ii.Increased rice yield and improved soil health	BRRI R/S, Sirajganj
27	Effects of different sources of fertilizer and variety on rice production in saline soil	i.To develop suitable integrated nutrient management package utilizing local resources that could help sustaining rice production with maintaining soil fertility.	BRRI R/S, Satkhira
28	Evaluation of bio-organic fertilizer for the improvement of rice yield and soil health	i.To evaluate the efficacy bio-organic fertilizer for growth and yield of rice. ii.To assess the impact of bio-organic fertilizer on soil health	BRRI, Gazipur,
29	Microbial characterization of different AEZs soil and formulation of biofertilizer for rice cultivation in acid and saline soil	i.To assess soil bio-physico-chemical properties of different AEZ's of Bangladesh and characterize potential plant growth promoting bacteria (PGPB) ii.To develop bio-fertilizer using potential microbes for rice cultivation in acid and saline soil	BRRI, Gazipur

30	Effect of Nitrobenzene (Flora) of Growth and Yield Parameters of Rice	To evaluate nitrobenzene of Growth and Yield Parameters of Rice	BRRI Gazipur and Sonagazi
31	Effect of NPK Combo Fertilizer on the Growth and Yield Parameters of Rice	To evaluate NPK Combo Fertilizer on the Growth and Yield Parameters of Rice	BRRI Gazipur and Sonagazi
32	Effects of potassium split fertilization at different growth stages on growth and yield of rice	To find out the best suited timing of potassium fertilizer application for rice crop.	Khulna and Barguna
33	Effects of Potassium Fertilization at Different Growth Stages on growth and yield of rice	To find out the effect of potassium fertilization at different growth stages of Rice	Paba, Rajshahi
34	Effect of selenium on growth and yield of rice	i.To identify optimum Selenium doses for rice. ii.To study the effect of Selenium on growth and yield of rice. iii.To observe the interactions among the different nutrients and Selenium on nutrient uptake and rice yield iv.To study the effect of Selenium on soil biochemical properties	BRRI, Gazipur
35	Effect of silicon on growth and yield of rice	i.To identify optimum Silicon doses for rice ii.To study the effect of Silicon on growth and yield of rice iii.To observe the interactions among the different nutrients and Silicon on nutrient uptake and rice yield iv.To study the effect of Silicon on soil biochemical properties	BRRI, Gazipur
36	Effects of fertilizer and varietal management on mitigating greenhouse gas emissions from	i.To quantify GHG emissions from rice field under different fertilizer and varietal management	BRRI, RS Satkhira

	rice cultivation in South-western coastal ecosystems	ii.To develop a technology for increased crop productivity with reduced negative environmental impacts. iii.To develop country specific Emission Factor and national GHG inventory	

Irrigation and Water Management Division			
	Program Area: CROP SOIL WATER MANAGEMENT		
Sl. No	**Research Title**	**Objectives**	**Location**
1	Change in surface water bodies and its impact on groundwater recharge in Barind region of Bangladesh	i.To find out the relationship between surface water storage and groundwater recharge ii.To figure out the options increasing surface water storage for enhancing GW recharge and sustainable crop production	Northwest region of Bangladesh Duration: 2021-2025
2	Surface water receding pattern in relation to Boro rice establishment in Haor region of Bangladesh	i.To determine weekly/fortnight water receding pattern and a contour map showing the water receding area ii.To determine suitable establishment period for escaping flash flood damage of Boro rice	Haor region Duration: 2021-2025
3	Irrigation water requirement and rainfall utilization for delayed transplanting of Boro rice in different locations of Bangladesh	i.To find out the variation of irrigation water requirement in relation to the delayed transplanting. ii.To maximize the rainfall utilization and to reduce the groundwater withdrawal.	Gazipur, Rangpur and Kushtia. Duration: 2021-2024
4	Feasibility assessment of solar pump utilization for irrigation purpose in Chattogram region	i.To evaluate the present status of solar pumps at field conditions in Chattogram region ii.To assess the suitability of solar pump system at Chattogram region	Chattogram region Duration: 2021-2022
5	Optimization of water use	i.To increase water use efficiency	Sirajganj

	efficiency through subirrigation and mini-sprinkler	in crop cultivation ii.To evaluate the performance of sub-irrigation and sprinkler irrigation system in transplanted rice field	Duration: 2021-2024
6	Saline water irrigation strategies for Boro rice cultivation in the coastal saline area	i.To find out the saline water irrigation management options for Boro rice cultivation ii.To quantify the ionic stress on plant shoot and root under saline water treatments	Dacope, Khulna Duration: 2021-2024
7	Effect of irrigation suspension on mitigating greenhouse gas emission in irrigated rice cultivation	i.To determine irrigation requirement and yield of Boro rice under varying practices ii.To assess irrigation suspension practices on reducing global warming potential	BRRI farm, Gazipur. Duration: 2021-2024
8	Reuse of domestic household water for crop production at BRRI farm, Gazipur	i.To find out the quality of domestic wastewater for irrigation ii.To assess the opportunities of domestic wastewater for irrigation	Gazipur Duration: 2021-2025
9	Assessing on-farm water-use efficiency of BRRI research farm, Gazipur	i.To find out present irrigation management status of BRRI farm ii.To suggest plan for efficient irrigation management plan for BRRI farm	Gazipur Duration: 2021-2025
10	Present status and potentiality for increasing rice cultivation in surface water irrigation projects of Bangladesh	i.To determine the present efficiency of major irrigation projects ii.To figure out the improvement options for surface water utilization	G-K, Teesta, Muhuri, Chandpur, M-D and Pabna irrigation projects area Duration: 2021-2024
11	Farm level irrigation efficiency determination by ODK software	i.To assess the present level of irrigation efficiency (IE) and water productivity (WP) of minor irrigation system ii.To assess the techno-socio-economic opportunity for improving irrigation efficiency.	Mymensingh Duration: 2021-2024

12	Determination of physical and hydraulic properties in different soil types	i.To document the important soil physical properties in different soil profiles ii.To develop a soil moisture characteristics curve	All Regional Station Duration: 2015-To be continued
13	Automated Alternate Wetting and Drying Irrigation System for Rice production	i.To use water efficiently for improving water productivity ii.To introduce digital irrigation system in rice cultivation	BRRI farm Gazipur. Duration: 2018-2022
14	Technique for Using Basin Water for Elevated Land Rice Cultivation during Dry Season in Haor Area	i.To bring elevated land under boro cultivation ii.To develop a technique for using basin water of haor during dry season	Habiganj, Netrokona, Kishoreganj Duration: 2018-2022
15	Study on the problems and potentials for productivity improvement through Agricultural water management in the Hilly areas	i.To identify potentials of water resources development for agriculture and livelihood improvement in the Hilly area ii. To recommend suitable water management options for productivity and livelihood improvement in the area.	Chittagong Hill Tracts Duration: 2015-2022
16	Study on water stress tolerance capacity for different advanced rice genotype of BRRI	i.To quantify the tolerance capacity of soil moisture deficit for different varieties that plant suffers during its growing period through Towfique's drought model. ii.To determine yield of varieties under different water stress condition	BRRI farm, Gazipur Duration: 2015- To be continued
17	Performance Evaluation of the Proposed Rice Varieties Under Different Water Regimes	i.To study performance of the proposed rice varieties under different water regimes ii.To evaluate suitable water regimes for proposed lines/varieties of rice	BRRI farm, Gazipur Duration: 2019-2023
18	Improving Soil-Water Availability for Crop Production in Char Land by Amendment	i.To determine soil physical properties of root zone soil layers ii.To determine water holding	BRRI R/S, Sirajgonj. Duration: 2019-22

	Practices	capacity of root zone soil layers iii.To measure soil-water retention curves of the soil layers and determine their parameters	
19	Determining Minimum Irrigation Water Requirement of Rice at Different Regions of Bangladesh through Water Balance from On-Farm Demand and Model Simulation	i.To measure yield response of rice to irrigation application base on on-farm demand and simulated irrigation requirement ii.To figure out variation in irrigation water requirements among different treatments	Gazipur, Kushtia, Rangpur Duration: 2020-23
20	Agricultural drought forecasting for mitigating drought in T. Aman rice	i.To determine drought using forecasted rainfall and evaporation ii.To determine suitability of drought model for forecasting, and	BRRI farm Gazipur. Duration: 2017-2022
21	Irrigation Scheduling of Rice (Oryza sativa L.) Based on Weather Forecasting in Gazipur	i.To predict water demand through water balance simulation model for rice cultivation ii.To recommend the better method for irrigation scheduling of rice	BRRI Gazipur Duration: 2019-2022
22	Feasibility evaluation of the use of subsurface drainage system for rice-based cropping pattern in Bangladesh	i.To identify post-monsoon waterlogged crop field under rice-based cropping pattern ii.To evaluate potential benefit due to installation of subsurface drainage system	Coastal zone (tidal and saline) Duration: 2020-2025
23	Assessment of suitable water resources availability for irrigation to increase crop production in tidal areas of Barisal region	i.To monitor the dynamics of surface water salinity in the dry season at different locations of Barisal region ii.To assess the suitability of water for irrigated crop cultivation.	Barisal, Jhalokhati, Pirojpur, Patuakhali and Barguna. Duration: 2015-To be continued
24	Water resources assessment during dry season crop cultivation in selected polders of coastal region	i.To delineate suitable water resources during dry season. ii.To assess the cultivated area by different cropping pattern based on water resources	Khulna, Barishal Duration: 2017-2022
25	Use of less saline water resources for increasing cropping	i. To bring fallow land under Boro cultivation	Barisal.

	intensity in Barisal region.	ii.To improve crop and land productivity in the region	Duration: 2017-2023
26	Monitoring of groundwater fluctuation and safe utilization in different geo-hydrological regions	i.To determine the fluctuation of groundwater level over time and its relationships with rainfall, and ii.To determine water quality for assessing suitability for irrigation.	All Regional Station. Duration: 1979-To be continued.
27	Conjunctive use of waste22water and fresh water for irrigatio23n in Boro rice cultivation24	i.To determine suitability of different types of wastewater for boro rice cultivation. ii.To analyze rice grain sample for heavy metal uptake.	BRRI farm, Gazipur Duration: 2020-2022
28	Ef25fect on percolation losses and grou26ndwater recharge due to weak ploug27h-pan formed under long term cons28ervation agriculture29	To determine amount of irrigation water contributed through deep percolation to ground water recharge under SP and CT. To determine the depth and vicinity of the nearest aquifer.	Rangpur Duration: 2020-2021
29	Assessment of groundwater level depletion dynamics, recharge estimation and sustainable use pattern in the selected locations of Bangladesh	i.To evaluate fluctuation pattern of GWL ii.To determine the GWL depletion trend	Northwest hydrological region and whole country Duration: 2019-23
30	Assessment of Surface and Groundwater Quality for Irrigation in Selected Locations of Bangladesh	i.To determine the surface and groundwater quality parameters ii.To determine the suitability of groundwater for irrigation	Gazipur, Rangpur, Comilla, Hobigonj, Rajshahi, Kushtia and Sonagazi Duration: 2019-22
31	Development of A Low-Cost Dc Solar Water Pump for Irrigation in Bangladesh	i.To use a permanent magnet brushless DC motor for operating solar water pump ii.To determine economic feasibility of the pump for rice cultivation	BRRI, Gazipur Duration: 2019-22
32	Evaluation of smallholder surface water solar irrigation system for crop production	i.To evaluate the technical and economic performance of a small capacity solar powered low lift centrifugal and submersible pumps	BRRI farm, Gazipur Duration: 2017-2020

		ii.To assess the value addition for versatile use of solar panels (Solar home system/Paddy thresher)	

Plant Physiology Division			
	Program Area: CROP SOIL WATER MANAGEMENT		
Sl. No	**Research Title**	**Objectives**	**Location**
	Project 1: Salinity Tolerance		
1.1	Exploring new sources of salinity tolerance from BRRI Gene Bank germplasm at the seedling stage	To identify salt-tolerant advanced breeding lines/genotypes at the seedling stage	Plant Physiology Division, BRRI, Gazipur
1.2	Screening of advanced breeding lines for salinity tolerance at the seedling stage during T. Aman and Boro season	To identify salt-tolerant advanced breeding lines/genotypes at the seedling stage	Plant Physiology Division, BRRI, Gazipur
1.3	Characterization of advanced breeding lines at salinity stress for the whole growth period during Aman and Boro season	To identify salt-tolerant advanced breeding lines/genotypes at the whole growth period	Plant Physiology Division, BRRI,Gazipur
1.4	Characterization of salt-tolerant varieties in artificial saline conditions for the whole growth period during Aman season.	To know the level of salinity tolerance of newly released BRRI varieties	Plant Physiology Division, BRRI,Gazipur
1.5	CRISPR-Cas9 mutagenesis of the OsRR22 gene for improving salinity tolerance of rice	To increase salinity tolerance via CRISPR-Cas9-targeted mutagenesis of the transcription factor gene *OsRR22.*	Plant Physiology Division/Biotechnology Division, BRRI, Gazipur
	Project 2: Submergence Tolerance		
2.1	Identification of rice germplasm /advanced breeding lines for two weeks flash flood submergence tolerance	To identify tolerant germplasm/advanced breeding line for two weeks of complete submergence at vegetative stage	Plant Physiology Division, BRRI,Gazipur
2.2	Confirmation of submergence tolerance of previously screened rice germplasm	To confirm the submergence tolerance of previously screened rice germplasm.	Plant Physiology Division, BRRI,Gazipur

2.3	Screening for stagnant flooding tolerance of Germplasm/advanced breeding lines at whole growth period during T. Aman season	To identify tolerant germplasm for water stagnation condition To observe tillering ability under water stagnation conditions	Plant Physiology Division, BRRI,Gazipur
2.4	Evaluation of elongation ability of BRRI dhan91 under deep flooding condition	To observe the elongation ability of BRRI dhan91 under deep flooding condition	Plant Physiology Division, BRRI,Gazipur
2.5	Effect of 2-3 times consecutive flash flood submergence at certain days interval on rice genotypes	To determine the degree of survivability and yield loss of submergence tolerant varieties as affected by 2-3 times consecutive flash flood submergence at different stage of vegetative phase	Submergence Tank, Plant Physiology Division, BRRI Gazipur
	Project 3: Drought Tolerance		
3.1	Confirmation of performance for ALART/ RYT /AYT materials under drought stress at reproductive stage (TRB-Project)	To evaluate of ALART/ RYT /AYT materials under control drought condition in the net house.	Rain-out shelter, Plant Physiology Division, BRRI Gazipur
3.2	Screening germplasm for drought tolerance at reproductive phase (TRB-Project)	To identify rice germplasm tolerant to drought stress at reproductive phase.	Farmers field, Alimganj, Paba, Rajshahi
3.3	Evaluation of previously selected germplasm under drought stress at reproductive phase in the rai shelter	To find out the correlation of field performance of tested genotypes with the performance under control drought condition in the rain-out shelter.	Rain-out shelter, Plant Physiology Division, BRRI, Gazipur
3.4	Physiological and biochemical characterization of advanced breeding lines under drought stress at reproductive phase	To assess the effect of drought stress on growth and yield of the tested genotypes To identify the physiological traits associated with drought tolerance.	Plant Physiology Division, BRRI,Gazipur
3.5	Characterization of rice germplasms under drought stress at reproductive phase using SSR marker	To study the genetic diversity of the germplasms.	Net house (Plant Physiology Division) BRRI, Gazipur
	Project 4: Heat Tolerance		
4.1	Exploring new sources of heat tolerance from Bangladeshi rice germplasm	To identify new sources of heat tolerance from Bangladeshi rice germplasm	Plant Physiology Division, BRRI,Gazipur

4.2	Screening for high temperature tolerance of spikelet fertility QTL introgression lines	To identify high temperature tolerant lines under controlled condition	Plant Physiology Division, BRRI,Gazipur
4.3	Observational trial of high temperature induced spikelet fertility introgression lines in the background BRRI dhan28 and BRRI dhan29	To identify high yielding and homogeneous lines having phenotypic similarity with respective recipient parents	Plant Physiology Division, BRRI,Gazipur
4.4	Marker assisted introgression of high temperature induced spikelet fertility QTL (qHTSF4.1) in the background of BRRI dhan48 and BRRI dhan62	To develop heat tolerant Aus and T. Aman (short duration) lines.	Plant Physiology Division, BRRI,Gazipur
	Project 5: Cold Tolerance		
5.1	Exploring new sources of cold tolerance from BRRI Gene Bank collections at seedling stage	To identify rice genotypes that can tolerate low temperature at seedling stage.	Plant Physiology Division, BRRI,Gazipur
5.2	Screening of advanced breeding lines for seedling stage cold tolerance (TRB-Project)	To identify advanced breeding lines which can tolerate low temperature at seedling stage.	Plant Physiology Division, BRRI,Gazipur
5.3	Characterization and evaluation of some selected rice genotypes for cold tolerance	To characterize rice genotypes at natural cold condition.	Plant Physiology Division, BRRI Gazipur
5.4	Screening of advanced breeding lines for cold tolerance (SDCTR-Project)	To identify cold tolerant advanced breeding lines for whole growth period.	Plant Physiology Division, BRRI Gazipur
5.5	Effect of polythene covering on seedling raising in Boro season	To identify the most suitable technique for protecting Boro rice seedling from cold injury	Gazipur, Rajshai, Cumilla, Habigonj, Barisal, Sonagazi, Bhanga, Rangpur, Kushtia, Satkhira, Gopalgonj, Sirajgonj
	Project 6: Growth studies		
6.1	Investigation of photosensitivity of advanced breeding lines and varieties	To know the photosensitivity of advanced breeding lines and recently released T. Aman varieties	Plant Physiology Division, BRRI Gazipur

6.2	Study of phenological development of newly released BRRI varieties	i.To observe the phonological development at different growing season ii.To estimate the genetic co-efficient for crop simulation	Plant Physiology Division, BRRI Gazipur
6.3	Determination of growth stages of some rice varieties as affected by sowing time during Aman season	i.To determine the duration of the different growth phases of rice varieties at various transplanting dates. ii.To detect appropriate degree days to initiate panicle in different transplanting dates.	Plant Physiology Division, BRRI Gazipur
6.4	Determination of growth stages of some rice varieties as affected by sowing time during Boro Season	i.To determine the duration of the different growth phases of rice varieties at various transplanting dates. ii.To detect appropriate digree days to initiate panicle in different transplanting dates.	Plant Physiology Division, BRRI Gazipur
6.5	Identification of regeneration ability Aus rice varieties	To determine the regeneration ability of Aus rice varieties	Plant Physiology Division, BRRI Gazipur
6.6	Determination of growth phase of short duration (60 days in India) Aus rice varieties	To determine the duration of the di fferent growth phases and yield potential of Indian Aus rice varieties	Plant Physiology Division, BRRI Gazipur
6.7	Screening of pre-harvest sprouting of some newly released BRRI varieties.	To check the pre-harvesting sprouting resistance on newly released BRRI varieties	BRRI RS Habigonj
	Project 7: Yield potential		
7.1	Generation of male sterile rice line for two-line hybrid system by editing TMS5 gene using CRISPR/Cas9 system	i. To generate a novel thermo-sensitive genetic male sterile line by editing *TMS5* gene via CRISPR/Cas9 for two-line hybrid system, ii.To evaluate the suitability of the TGMS line in two-line hybrid breeding program	Plant Physiology Division/Biotechnol ogy Division, BRRI Gazipur

7.2	Lodging tendency in BRRI developed T Aman varieties	To determine the lodging characters of four BRRI varieties at different nitrogen levels.	Plant Physiology Division, BRRI,Gazipur
	Project 8: C4 rice research and development		
8.1	Investigation of anatomical and photosynthetic differences in rice leaves and C4 species	i.To identify leaf anatomical differences between rice and C4 species. ii.To explore differences of photosynthetic related parameters between rice and C4 species	Plant Physiology Division, BRRI Gazipur
8.2	Optimizing chlorophyll fluorescence imaging system for photosynthetic efficiencies of C3 and C4 species in different stress condition	i.To identify photosynthetic efficiencies of C3 and C4 species under low CO_2 stress. ii.To explore photosynthetic differences of rice under salinity, submergence and drought stress	Plant Physiology Division, BRRI Gazipur
	Project 9: Crop Weather Information		
9.1	Automatic weather station data collection and storage	To collect, transfer and storage of automatic weather station data	BRRI Gazipur, R/S Rangpur, Rajshahi, Bhanga, Habiganj, Satkhira, Sirajgang
9.2	Manual weather station data collection and maintenance	To collect, transfer and storage of different weather variables.	BRRI Gazipur, R/S Rangpur, Rajshahi, Cumilla, Bhanga, Barisal, Habiganj, Sonagazi,

Entomology Division			
	Program Area: PEST MANAGEMENT		
Sl. No	**Research Title**	**Objectives**	**Location**
	Sub-program : Insect Pest and Rodent Management		
1.	**Project: Survey & Monitoring of Rice Arthropods.**	To determine the incidence and abundance patterns of insect pests and their natural enemies at BRRI farm and in different AEZ's for better management of rice pests.	
	1.1 Pest monitoring in BRRI farm.	To study the insect pest and their natural enemy incidence at BRRI farm and create a database to	Gazipur

		develop a forecasting system.	
	1.2 Insect pests and natural enemy in light trap.	To study the pest and their natural enemy incidence patterns in rice fields and to create a database to develop a forecasting system.	Gazipur and all R/S
	1.3 Survey and monitoring of rice arthropods and yield loss estimation.	i.To know the present status of insecticide application. ii.To reduce insecticide application in rice production. iii.To assess the yield loss due to infestation of rice insect pests.	Barisal, Rangpur, Habiganj, Sirajganj
	1.4 Fall Army worm (FAW) monitoring in rice.	To determin the incidence pattern of FAW in rice.	Gazipur, Barishal, Chuadanga, Rangpur
	1.5 Impact of lighting period on the trapping of insect.	i.To find out the effective lighting period for maximum insect trapping. ii.To find out the suitable insect catching time. iii.To reduce the trapping of natural enemies.	Gazipur, Barishal, Rajshahi
2.	**Project: Bio-Ecology of Rice Insect Pest and Natural Enemy.**	To study the ecology and development of insect pest of rice.	
	2.1 Behavioral adaptation of RLR in different weather condition.	To identify the effects of temperature elevation on life cycle of rice leaf roller.	Gazipur
	2.2 Behaviour and biological parameters of Fall Armyworm when feeding rice.	i.To find out the impact of non-host rice food on the demographic parameters of fall armyworm ii.To understand the management strategy of fall army worm in rice field	Gazipur
3.	**Project: Biological Control of Rice Insect Pests.**		
	3.1 Conservation of natural enemies through eco-engineering	To conserve natural enemies through ecological engineering approaches.	Gazipur, Barisal, Rangpur
	3.2 Study on entomogenous fungi to control BPH.	i.To isolate the fungi from naturally infected insects.	Gazipur

		ii.To explore suitable media for mass production of the entomogenous fungi and its use in BPH management.	
4.	**Project: Crop Loss Assessment.**	To determine relationship between pest damage levels and yield losses.	
	4.1 Effect of deadheart and whitehead on rice grain yield caused by stem borer (DHB, YSB).	i.To determine the compensation abilities of different rice varieties against yellow stem borer damage. ii.To know the relationship between YSB damage and yield loss.	Gazipur, Rajshahi
5.	**Project: Evaluation of Chemicals and Botanicals against Rice Insect Pests.**	To evaluate the effectiveness of different botanicals and determine efficacy of different insecticides against major rice insect pests.	
	5.1 Test of different insecticides against major insect pests.	To evaluate the effectiveness of commercial formulation of different insecticides against major insect pests of rice.	Gazipur
	5.2 Use of nanoparticle to control rice insect pests.	i.To develop nano-particle based pest management in rice ii.To reduce chemical pesticide load in environment.	Gazipur
	5.3 Effect of insecticides on natural enemies of rice insect pests.	To identify relatively safer insecticides for using (if needed) in IPM program.	Gazipur
6.	**Project: Insecticide Toxicology**	To detect insecticide residue in rice.	
	6.1 Residue analysis of different insecticide in rice.	i.To detect insecticide residues in rice hull, bran and polished rice. ii.To establish monitoring and guidance on safe use of insecticide in rice field.	Gazipur
	6.2 Evaluation of pesticide residue in candidate rice samples.	To detect insecticide residues (if any) in candidate rice samples.	Gazipur
7.	**Project: Host Plant Resistance.**	Identification of resistant sources against rice insect pests.	
	7.1 Screening of rice germplasm, advance line against BPH, WBPH, GLH.	To identify resistant rice germplasm against major insect pests.	Gazipur

	7.2 Development of BPH resistance rice introgression lines through marker assisted selection.	i. Development of elite donor for BPH resistance breeding program. ii.Development of new breeding lines for BPH resistance.	Gazipur
	7.3 Identification of BPH resistant sources from rice germplasm.	To characterize BPH resistant germplasms using BPH resistant linked markers.	Gazipur
	7.4 Suppression of serotonin synthesis in rice using CRISPR Cas9 for insect control.	i.To develop insect resistant rice variety ii.To reduce insecticide dependency.	Gazipur
	7.5 Resistance mechanism in BRRI dhan33 to gall midge	i.Identify the gall midge resistance gene in BRRI dhan33. ii.Identify polymorphisms in parental lines, BRRI dhan33 and BRRI dhan49 and isolate the responsible gene by genetic linkage analysis.	Gazipur
	7.6 Pyramiding three BPH resistance genes (Bph2, Bph20, & Bph32) using marker-assisted selection in BRRI dhan89	i.Develop three/two gene pyramiding lines using marker assisted breeding. ii.Evaluate the effects of BPH-resistant lines carrying different R genes after infestation with BPH.	Gazipur
8.	**Project: Molecular Biology of Rice Insect Pests.**	To dissect the genomic diversity of rice arthropods.	
	8.1 Genome sequencing of yellow stemborer.	To provide a complete and accurate genome sequence of rice hispa.	Gazipur
	8.2 Molecular characterization of *Nilaparvata lugens* in Bangladesh based on COI analysis	i.To assess a gene diversity of BPH in Bangladesh. ii.To know the impact of geographic location in BPH genomic structure.	Gazipur
	8.3 Gene drive to control *Nilaparvata lugens.*	To assess a gene drive strategy to control the insect pest that threatens the staple food production in Bangladesh.	Gazipur
9.	**Project: Integrated Pest**	Reduction of chemical pesticide and safe food	

	Management	management.	
	9.1 Use of sex pheromone to control rice leafroller and yellow stemborer.	i.To test the efficacy of sex-pheromone against leafroller in rice field. ii.To control rice leaf roller without insecticide.	Gazipur, Rajshahi, Barishal, Habiganj
10.	**Project: Vertebrate Pest Management**	Management of rat in the rice field.	
	10.1 Evaluation of different rodenticide against rice field rats.	To find out effective rodenticide to control rat.	Gazipur, Barishal, Rajshahi

Pathology Division			
	Program Area: PEST MANAGEMENT		
1	Survey and monitoring of rice diseases in selected areas	To investigate the present status of different rice diseases in different climatic environments and to update disease crop calendar	Rajshahi, Rangpur, Satkhira, Barishal, Habiganj & Cumilla
2	Monitoring of rice diseases in HIZR and healthier rice under confined condition	To determine the incidence and severity of rice diseases on the genotypes	Gazipur
3	Estimation of production loss due to rice disease	To estimate the yield loss in selected areas	Satkhira, Rangpur & Cumilla
4	Pathotypic and genetic diversity of *Rhizoctonia solani* AG1-IA	To estimate the genetic diversity of *R. solani* AG1-IA using ITS region sequences	Gazipur & Japan
5	Molecular characterization of bakanae causing fungi in Bangladesh	To find out the fungi associated with bakanae disease of rice in Bangladesh	Gazipur
6	Development of differential system of *Xanthomonas oryzae* pv. *oryzae* and study on its molecular diversity	To identify a standard differential set of isolates of *X. oryzae* pv. *oryzae*	Gazipur
7	To study the microbial effect on expression of AQU, DHN and DREB genes in rice under drought stress	i.To identify potential microbes for drought tolerance in rice. ii.To find out the efficacy of microbes as drought tolerance in	Gazipur

		rice	
8	Determination of toxins from infected seeds by seed borne pathogens	i.To determine the level of major toxins in contaminated seeds. ii.To identify deterioration of antioxidant properties in infected seeds	Gazipur
9	Studies on entomopathogenic fungi (*Metarhizium anisopliae*) to control BPH	To identify the pathogenicity of entomopathogenic fungi against BPH	Gazipur
10	Development of an inoculation technique for mass screening of sheath rot disease	To find out an effective and efficient inoculation method for mass screening	Gazipur
11	Development of a new scale for scoring of sheath rot disease	To develop an easy and accurate scale for sheath rot disease scoring	Gazipur
12	Identification of the source of infection of rice false smut disease	To disclose whether the spores of *Ustilaginoidea virens* are in the air or not	Gazipur
13	Improvement of differential system for rice blast disease in Bangladesh using differential system and molecular marker	To select new differential blast isolates	Gazipur
14	Isolation of potential fungi for controlling major weeds of rice	To identify potential fungi for controlling major weeds of rice	Gazipur
15	Production of afla toxin by storage fungi at different moisture level in storage condition	To determine the population of different storage fungi	Gazipur
16	Etiology, Epidemiology and Management of Bacterial Panicle Blight (BPB): An emerging and climate sensitive rice disease in Bangladesh	To conduct a details studies on bacterial panicle blight (BPB) disease in Bangladesh	Gazipur
17	Determination of variability of rice tungro virus strain of Bangladesh	To check the variability of rice tungro virus of Bangladesh	Gazipur
18	Comparative study of mass inoculation technique for sheath	To determine the effective method for inoculation	Gazipur

	blight in rice caused by *Rhizoctonia solani* under field condition		
19	Studies on population structure of seedling blight pathogens of rice	To know the population structure of seedling blight pathogen	Gazipur
20	Exploring new sources of resistance and pyramiding blast resistant gene in Boro rice	To find out new source of major resistant gene(s) against blast disease in the native land races	Gazipur
21	Screening of advanced breeding lines and land races against blast, bacterial blight and sheath blight diseases	To identify the source of resistance against blast, bacterial blight and sheath blight diseases of rice	Gazipur
22	Introgression of blast resistant genes into BRRI dhan47	To develop durable blast resistant variety harboring *Pi40* and *Pi9* genes	Gazipur
23	Identification of major blast resistant genes in jhum rice	To find out blast resistant source(s) of *Pi genes*	Gazipur
24	Exploring new source of blast resistance in native rice germplasms	To identify new sources of resistance from upland rice germplasm	Gazipur
25	Improvement of BRRI varieties for resistance to blast and bacterial blight diseases using marker assisted backcross breeding	To develop durable resistant cultivars through pyramiding of both BB and blast genes (broad spectrum resistance)	Gazipur
26	Identification of resistant sources and gene pyramiding of bacterial blight and blast resistance into the background of BRRI dhan29 through MAS	To identify bacterial blight and blast resistant sources	Gazipur
27	Pyramiding of major BB resistant gene(s) in susceptible rice varieties/lines	To introgress major BB resistant gene(s) into the selected cultivar for durable resistance	Gazipur
28	Observational trial of blast resistant advanced lines	To evaluate the blast resistance and yield	Gazipur
29	Gene detection of bacterial blight (BB) resistance in local rice	To identify BB resistant genes in	Gazipur

	cultivars using phenotypic and molecular studies	native cultivars	
30	Screening of LST against BB and blast	To identify resistant source(s) against BB and blast	Gazipur
31	Screening of rice germplasm against bakanae disease	To identify the resistant sources against bakanae disease of rice	Gazipur
32	Screening of land races against Sheath blight disease	To identify the resistant source against sheath blight disease of rice	Gazipur
33	Linkage and QTL mapping of tungro resistance in rice	To identify significant QTLs with linked marker for tungro resistance in rice land race Kumragoir	Gazipur
34	Development of prebreeding materials for tungro resistance	To develop tungro resistant advanc lines	Gazipur
35	Development of blast resistant varieties using differential system and molecular markers	To develop blast resistant varieties for Bangladesh	Gazipur
36	Studies on the genetic mechanism of rice blast resistance in BRRI dhan33	To know the genetic mechanism of rice blast and gall midge resistance in BRRI dhan33	Gazipur
37	Linkage and QTL mapping of blast resistance in BR16	To identify significant QTLs with linked marker for blast resistance in BR16	Gazipur
38	Disease reactions and characterization of upland rice germplasms	To know the different disease status of germplasm	Gazipur
39	Studies on host range of the rice blast pathogen	To determine the pathogenicity of all the isolates to rice and the pathogenicity of rice isolates to foxtail millet and barely	Gazipur
40	Detection of novel loci underlying rice blast resistance by integrating a genome-wide association study	To detect the new sources/loci/genes of blast resistance from native germplasm	Gazipur
41	Diversity of blast resistance gene(s) in rice germplasm	To find out resistance gene(s) among the germplasm through phenotypic reaction and molecular	Gazipur

		marker	
42	Development of Rice Blast Resistance by CRISPR/Cas9-Targeted Mutagenesis of the *OsERF922*	To develop durable blast resistant variety or line against the major races by targeted mutagenesis (CRISPR/Cas9)	Gazipur
43	Screening and observational yield trial of tungro resistant materials in green house and tungro hotspot area	To evaluate the performance of tungro resistant advanced lines	Gazipur
44	Phenotypic and genetic characterization of local aromatic germplasms	To characterize their resistance pattern for developing blast resistant aromatic pre breeding materials	Gazipur
45	Transcriptome analysis for the detection of novel bacterial blight and sheath blight resistant gene in Gunshee, landrace	To identify novel resistant gene of bacterial and sheath blight disease.	Gazipur
46	Introgression of blast resistance gene(s) into BRRI dhan58 using marker assisted backcross breeding	To introgress blast resistant genes (both Pi9 and Pb1) in high yielding BRRI dhan58	Gazipur
47	Development of inoculation technique for false smut disease	To develop artificial inoculation technique of rice false smut disease	Gazipur
48	Effects of rice false smut contaminated seeds on quality	To see the effects of seed contamination on the attributes of seed quality	Gazipur
49	Investigation of grain quality and nutritional status of rice infected by major diseases	To determine the grain quality in terms of seed health, nutritional value and physicochemical properties	Gazipur
50	Yield loss due to sheath rot disease in rice	To find out the relationship between sheath rot disease severity and yield reduction in rice	Gazipur
51	Crop loss assessment of rice caused by bacterial blight and sheath blight	To estimate yield loss due to bacterial blight and sheath blight	Gazipur
52	Development of a yield loss app	To estimate yield loss due to	Gazipur

		diseases instantly	
53	Development of Early Warning System of rice blast disease	To build up awareness among the rice growers at least 5 days earlier of blast disease infection	Cumilla & Gazipur
54	Crop Loss Assessment of rice due to major diseases in Bangladesh	To calculate the actual crop loss due to major diseases in Bangladesh.	Cumilla & Gazipur
55	Determination of Aflatoxin B1 and B2 by *Aspergillus flavus* strains isolated from rice samples	To determine the efficacy of aflatoxin production by *A. flavus* isolates.	Cumilla & Gazipur
56	Determination of toxins from infected seeds by seed borne pathogens	To find out losses of antioxidant properties in infected seeds	Cumilla & Gazipur
57	Development of an yield loss app	Instant estimation of yield loss due to major rice disease	Cumilla & Gazipur
58	Yield loss assessment of bacterial blight disease and its effect on yield in some popular boro varieties	To determine the yield loss due to BB	Cumilla & Gazipur
59	Up-scaling of the management of rice seedling blight disease in farmers seed bed during boro	To test the efficacy of seedling blight disease management technology under field condition	Rangpur and Rajshahi
60	Isolation of effective bacterial isolate for management of sheath blight disease	To isolate and identify the effective isolates against sheath blight disease	Gazipur
61	Management of sheath blight disease using Trichoderma *hertzian*	To investigate the efficacy of *Trichoderma harzianum*	Gazipur
62	Bakanae disease control with integrated approach	To find organic amendments and chemicals for controlling bakanae disease	Gazipur
63	Formulation of nano particles from plant parts against bakanae disease	To formulate nano particles from organic sources for controlling bakanae disease	Gazipur
64	Identification of potential bio-control agents and formulation of biopesticides against bakanae	To identify and confirm effective microbes through (*Bacillus* spp, *Pseudomonas* spp., *Trichoderma*	Gazipur

	disease of rice	spp.) *in vitro* and molecular approach for controlling bakanae disease	
65	Chemical control of sheath rot and false smut disease of rice under different planting time	To find out effective fungicide/s against Sheath rot and fungicide.	Gazipur
66	Development of nano particle mediated fungicide for rice blast disease management in Bangladesh	To develop nano particle mediated fungicide for neck blast disease management as curative measure.	Gazipur
67	Factors affecting recent outbreak of rice tungro disease and its management in Cumilla region	To identify the causes to increase the incidence of rice tungro disease	Cumilla
68	Determination of residual effect in fungicides treated rice	To find out the pesticide residue in pesticides sprayed rice	Gazipur
69	Digitalization of Pesticide Resister	To provide the pesticide evaluation report in mobile phone	Gazipur
70	Performance of Ankuri as a seed treating device	To examine the efficacy of Ankuri in controlling seed borne diseases using Ankuri	Gazipur
71	Sustainable Management of Blast, Sheath Blight and Bacterial Blight Diseases of Rice through Nano-particles (NPs)	To prepare effective nano-particles from organic and inorganic sources in Bangladesh	Gazipur
72	Bio-synthesis and characterization of silver nano-particles from available organic sources in Bangladesh	To bio-synthesize of nano-particles from available sources in Bangladesh	Gazipur
73	Efficacy of nanoparticles against bacterial blight disease management in rice	To determine efficacy of nanoparticles against bacterial blight disease	Gazipur
74	Residual Effect of Amistar Top 325 SC on Microbial Community in Phylloplane and Phyllosphere	To determine the impact of Amister Top application on microbial colony	Gazipur
75	Determination of residual effect of trifloxystrobin, tebuconazole and tricyclazole in rice grain	To find out the pesticide residue in pesticides sprayed rice	Gazipur

	under field conditions		
76	Digitalization of Pesticide Register Notebook	To provide the pesticide evaluation report in mobile phone.	Gazipur
77	Validation of Tungro disease management technology in Cumilla region	To build up awareness and make the confidence about the technology to the farmers	Gazipur
78	Efficacy of New Chemicals in Controlling Grain Spot, Brown Spot and Narrow Brown Spot of BRRI dhan52	To select appropriate chemical(s) against diseases	Gazipur
79	Integrated Approaches in reducing Sheath blight diseases in T Aman 2021-22	To minimize chemical use	Gazipur
80	Efficacy of drought tolerant Trichoderma in field condition	To find out the efficacy of microbes as drought tolerance in rice	Gazipur
81	Evaluation of new chemicals against blast, bacterial blight, sheath blight, false smut, Sheath rot and bakanae diseases of rice	To find out the effective chemicals suitable for Blast, ShB, False smut, bakanae and Bacterial blight diseases	Gazipur, Rajshahi, Barishal & Cumilla
82	Training on integrated management of blast, bacterial blight and tungro diseases in changing climate	To build up farmer's awareness on integrated rice disease management	Regional Stations

Rice Farming Systems Division			
	Program Area: RICE FARMING SYSTEMS		
Sl. No	**Research Title**	**Objectives**	**Location**
1	**Survey**		
1.1	Survey on tobacco-based cropping system	To characterize and generate information on tobacco-based cropping system and identify the drivers of adoption of tobacco cultivation and possibilities of replacing tobacco by other high value crops	Kushtia, Nilphamari, Lalmonirhat, Bandarban and Cox's bazar

1.2	Characterization of farming system of Charlands in Gangatic Floodplain region	To characterize and generate information on the existing farming system and identify problem and prospects of Charland agriculture in the Gangatic Floodplain regions for exploring its opportunities of improvement	Char Bhandrashion, Faridpur, Shibchar, Madaripur, Goalanda, Rajbari
2	**Research and development on cross cutting issues**		
2.1	Cropping pattern intervention for farmer's livelihood improvement on community basis	To analyze land suitability of profitable cropping patterns and to intervene all existing cropping patterns of the selected site for improvement and increased production	Kaliganj, Gazipur
3	**Development of Resource Conservation and Component Technologies for Stress Prone area**		
3.1	Integration of mustard and pulses in the rice-based cropping system under different rice growing environments	To increase the system productivity by inclusion of mustard and pulses in the existing cropping systems	Rajshahi, Kushtia, Bhanga, Satkhira, Gopalganj and Kaliganj, Gazipur
3.2	Evaluation of different cropping patterns in Charland	i. To identify improved cropping patterns for charland with high yield potential and economic return ii. To identify existing cropping pattern with the possibilities of intervention for improvement iii. To disseminate improved cropping patterns in extrapolation domain	Char Bhandrashion, Faridpur: Shibchar, Madaripur and Goalanda, Rajbari
3.3	Synchronization of transplanting of Boro rice in different elevations of haor by double transplanting method	To avoid the use of old seedlings and reduce the life span of Boro varieties at lower elevation by practicing DT and thereby create scope to avoid flash flood and increase yield in haor areas	Kotiadi, Kishoreganj
3.4	Study of traditional and eco-friendly cropping systems with different ecological indicators.	i. To assess the performance of indicators of eco-farming. ii. To explore the safe and secured crop (food) production system.	BRRI, Gazipur

3.5	Impact evaluation of temperature and precipitation changes on promising rice cultivars in Bangladesh using crop simulation model ORYZA	To evaluate the yield performance of promising Boro and Aman rice cultivars in the major rice ecosystems and generated information be used for identify management options under future climate change environment for sustaining productivity	BRRI, Gazipur
3.6	Effect of incorporation of moringa (*Moringa oleifera* Lam.) leaves and stem on healthier rice production in Rice-Watermelon-Dhaincha cropping pattern	i. To assess the effect of moringa pruning materials on growth and yield of crops. ii. To ascertain the efficacy of moringa leaf extract on disease-pest management in crop production	BRRI, Gazipur
3.7	Productivity evaluation of different cropping patterns	i. To fit the suitable rice genotypes in different cropping patterns ii. To quantify the total NSC from tested cropping pattern aiming to find healthier cropping pattern (based on nutritional value)	BRRI, Gazipur
4	**Development of Cropping Systems and Component Technology for Hilly Area**		
4.1	Fertilizer management in HYV Aus rice in Jhum cultivation	i. To develop a suitable method of fertilizer application in HYV Aus under jhum cultivation ii. To increase fertilizer use efficiency through proper management	Khagrachori, Rangamati and Bandarban
4.2	Performance evaluation of HYV Aus rice along with local cultivars under Jhum cultivation system	To determine comparative productivity and suitability of HYVs in respect to local Jhum cultivars	Rangamati, Khagrachori and Bandarban
4.3	Effect of sowing date on ratooning ability of local Jhum rice under Jhum cultivation	To determine the feasibility of ratooning of jhum rice and evaluate jhum cultivars for ratooning ability	Rangamati, Khagrachori, Bandarban and Gazipur
4.4	Feasibility study of relay cropping of felon/blackgram with jhum crops	To increase the system productivity by incorporation of a relay crop	Rangamati, Khagrachori and Bandarban
4.5	Development of integrated	To develop orchard with cheshunt,	Rangamati,

	farming system at farm level with high value crops maintaining contour system, alley cropping and hedge row in hill slope	coffee, dragon fruit, other fruits and horticultural crops for system productivity increase	Khagrachori and Bandarban
5	**Development of Cropping Systems and Component Technology for Favorable Environment (Irrigated condition)**		
5.1	Long term cropping patterns trial	To determine the long-term implications of one, two, three, four and five cropped cropping patterns on system productivity, economics, energy use and produce, water and other input use, nutritional output, weed infestation and soil health	BRRI, Gazipur
5.2	Determination of the effects of rice sowing date and seedling age on yield of popular premium quality rice varieties	To determine the effects of sowing dates, transplanting dates and seedling age for popular premium quality rice varieties in different locations and to generate data for simulation by *ORYZA* to determine optimum transplanting window, management practices for increased yield	BRRI, Gazipur
5.3	Development of four-crop cropping patterns for favorable irrigated ecosystem in medium highland	i. To increase total productivity of unit area per year by increasing cropping intensity ii. To compare the sustainability of four-crop cropping patterns with that of three-crop cropping pattern in terms of soil heath and profit.	BRRI, Gazipur
5.4	Evaluation of organic farming on yield of rice based cropping patterns	To find out the performance HYV rice in organic cultivation	BRRI, Gazipur
6	**Validation and Delivery of Cropping Systems Technology**		
6.1	Dhanbari, Tangail		
6.2	Improvement of Jhum cultivation through the replacement of local rice with the modern Aus rice in hilly areas	To increase the system productivity	Khagrachori, Rangamati, Bandarban
6.3	Intensification of single T. Aman	To increase the system	Khagrachori,

	area through the inclusion of modern Aus rice in the valley in hilly areas	productivity	Rangamati, Bandarban
6.4	Inclusion of Mustard after T. Aman in Boro-Fallow -T. Aman cropping pattern in piedmont plain soil	i. To increase the total system productivity ii. To increase oil seed production	Khagrachori, Rangamati and Bandarban
6.5	Piloting of cropping pattern technologies to increase the productivity	To increase the productivity of cropping systems at farm level	Pakundia, Kotiadi Kishoreganj and Kaliganj, Gazipur
6.6	On-farm evaluation of newly released Boro varieties as late Boro in Potato-Boro-T. Aman cropping pattern	To assess the performance of newly released Boro variety after potato in order to increase system productivity	Rajshahi, Rangpur and Bogura
7	**Development of Semi-aquatic Farming System**		
7.1	Development of vegetables, fish and fruit system in mini pond	To develop mixed farming system technology in mini pond for diversifying and maximizing yield	Gazipur
8	**Development of homestead agro-forestry systems with exotic date palm (*Phoenix dactylifera*) in the drought-prone ecosystem**		
8.1	Performance of exotic date palm (*Phoenix dactylifera*) in homestead and agro-forestry systems	To develop agro-forestry system with exotic date palm to increase the system productivity and income of the farmers	Gazipur
9	**Integrated Farming Research and Development for Livelihood Improvement in the Plain Land Eco-system**		
9.1	Year-round vegetables and spices production in homestead	i. To utilize the fallow land under orchard ii. To increase the total productivity of orchard	Sreepur
9.2	Improvement of the existing Boro-Fallow-T. Aman cropping pattern through inclusion of oil seed and pulse crops	To increase the system productivity	Sreepur
9.3	On-farm evaluation of Aus and T. Aman rice varieties in T. Aus-T. Aman-Rabi cropping system impartially irrigated ecosystem	To investigate the suitability of Aus and T. Aman rice varieties in Rabi-T. Aus-T. Aman cropping system	Sreepur

Farm Mechinery and Post Harvest Technology Division & Workshop Machinery and Maintenance Division			
	Program Area: FARM MECHANIZATION AND POSTHARVEST TECHNOLOGY		
Sl. No	**Research Title**	**Objectives**	**Location**
01	**Development of Agricultural Machines**	Development of farm machinery adaptable to rice eco-system and reduction of human drudgery	Gazipur
	1.1: Evaluating and modifying of BRRI developed machines	i.To verify the quality of BRRI machines ii.To identify the functional problems of farm machines iii.To improve the performance of farm machines	FMPHT divisional research workshop and BRRI farm
	1.2: Design and development of a head feed power thresher	i.To design and develop a head feed thresher ii.To conduct test of the thresher for its performance and capacity iii.To compare the performance with the existing threshers	FMPHT divisional lab
	1.3: Design and development of whole feed mini combine harvester	i.To assess combine harvester field performance, general condition, durability, repair and maintenance requirements ii.To check the fuel consumption and hourly production of the combine harvester under different working conditions iii.To obtain operator views regarding the suitability of combine harvester.	FMPHT divisional lab
	1.4: Design and development of head feed mini combine harvester	i.To design a head feed combine harvester ii.To manufacture the designed combine harvester prototype iii.To carry out field performance	FMPHT divisional lab and Janata Engineering

		test of the developed combine harvester prototype	
	1.5: Design and development of remote-control seed sower machine for raising mat-type seedling	i.To improve the existing manual seeds sower machine using an electronic device ii.To evaluate the performance of the seeds sower machine	FMPHT divisional lab
	1.6: Development of a forward motion manual rice transplanter	i.Design and fabrication of a manual operated forward motion rice transplanter ii.Performance evaluation of the developed rice transplanter	FMPHT divisional lab and field
	1.7: Development, validation and adoption of power weeder for wet land rice cultivation	i.To develop and multiplication of the power weeder ii.To demonstration, validation and adaptation the weeder in different location under different rice seasons iii.To reduce the rice production cost	Gazipur, Mymensigh, Netrokona, Habigonj, Rangpur and Comilla
	1.8: Design and development of walking type power operated rice transplanter	i.To design and develop a power-operated rice transplanter ii.To test the performance of the developed rice transplanter	Gazipur, Mymensigh, Netrokona, Habigonj, Rangpur and Comilla
	1.9: Design and development of a medium type head feed type combine harvester	i.To design and development a head feed paddy combine harvester (medium/small type) ii.To fabricate the machine based on the design consideration in Bangladesh condition iii.To evaluate the field performance in different crop seasons and soil condition iv.To build the capacity of local manufacturers to fabricate the newly designed machine	BRRI, Gazipur and Fermers' field
	1.10 Design and development of	i.To design a variable power	BRRI, Gazipur and

	a diesel engine operated high-speed hydro-tiller for marshy land	transmission mechanism of the diesel engine operated hydro-tiller ii.To design a rotary casing of hydro tiller suitable for marshy land iii.To develop a prototype based on engineering design iv.To evaluate the prototype in different soil condition	Fermers' field
	1.11 Postharvest loss assessment of whole and head feed combine harvester under different soil condition	i.To assess the loss of grain. ii.To identify the suitable operation system to minimize the loss.	BRRI, Gazipur and Fermers' field
	1.12 Design and development of inclined plate hill dispensing seeder for direct seeding of rice	i.To design and development of hill dispensing type direct seeder of rice ii.To design simple metering device for different graded of rice varieties iii.To design simple and easy power transmission mechanism for furrow making, covering, uniform and hill dispensing of seeds. iv.To test, evaluate and validate the technology in laboratory, research field and farmers' field	BRRI, Gazipur and Fermers' field
	1.13 Determination of optimum seed rate for Hybrid rice variety for mechanical transplanting in Bangladesh	i.To identify the optimum seed rate for different hybrid rice variety to produce quality seedlings and minimize the missing hills of mechanical transplanting. ii.To identify suitable seedling adjustment options to dispense optimum number seedling per stroke (seedlings hill-1) of the rotary picker of rice transplanter.	BRRI, Gazipur and Fermers' field
	1.14: Development of mat type seedling using hydroponic technique	i.To develop a mat type seedling using hydroponic technique ii.Performance test of developed	BRRI, Gazipur and Fermers' field

		seedling for rice transplanter	
	1.15: Attachment of binding facilitiy in BRRI self-proplled reaper	i.To evaluate the existing binding facility & improve the binding facility ii.To attach binding unit in existing BRRI self-propelled reaper	BRRI, Gazipur and Fermers' field
02	**Milling and Processing Technology**	To reduce loss, improve quality and addition of value to the farm products	All over the country
	2.1: Design and development of solar dryer	i.To design, fabricate and develop solar dryer ii.To compare with traditional sun drying of paddy	FMPHT divisional lab
	2.2: Test, evaluation and modification rubber roll de-husker for commercial use	i.To modify and development of a rubber roll de-husker ii.To evaluate the performance of paddy de-husker	FMPHT division milling laboratory
	2.3: Effect of drying and tempering on milling recovery of BRRI Variety under different moisture content	To find out optimum moisture content for maximum milling yield and head rice recovery	FMPHT division milling laboratory
	2.4: Design and development of a small scale recirculating type dryer	i.To design and fabricate of small scale recirculating type dryer ii.To study spatial distribution of air temperature and moisture content in and outside of small scale recirculating type dryer; iii.To investigate technical and financial performance of small scale recirculating type dryer; and iv.To study the effect of drying on germination rate and milling quality.	FMPHT division milling laboratory
	2.5: Study the effect of polishing on rice grain quality	i.To find out the suitable levels of polishing on rice ii.To investigation the weight loss	FMPHT division milling laboratory

		during milling iii.To evaluate the Zn and Fe concentration of selected rice varieties iv.To observe the head rice recovery of different DOM	
03	**Development of stores and storage technology**	To increase shelf life of rice in store	FMPHT Lab and Gazipur
	3.1: Effect of ageing on milling performance of premium quality rice	To observe the milling performance of BRRI dhan50 at different aging	FMPHT division milling laboratory
	3.2: Validation and adaptation of hermetic storage structure in household level of Bangladesh	To compare the performance of traditional and hermetic storage technologies in rice storage	FMPHT division milling laboratory
	3.3 Effect of different storage structure of milled rice in long-term storage	i.To find out the suitable storage structure ii.To investigation the influence of moisture content of storage time iii.To observe the prevalence of insect/ diseases infestation of storage time iv.To determine the effect of length of storage time on the quality of milled rice	FMPHT division milling laboratory
04	**Renewable Energy Technology**	Development of renewable energy extraction technologies from solar, agri-residues and waste products	BRRI , Gazipur
	4.1: Study the briquette production from rice byproduct	i.To prepare briquettes from rice straw and husk ii.Characterization of different briquettes originated from agricultural residue iii.To measure the calorific value of the briquettes	FMPHT Lab and Gazipur
	4.2: Study on solar energy utilization for small	i.To design mechanism of solar energy utilization	FMPHT Lab and Gazipur

	agricultural machinery	ii.To evaluate the performance of the developed machine	
	4.3 Identification of agricultural residues for maximizing biogas production	i.To identify the potential biogas material from agricultural residues ii.To find out the best mixing ratio for maximum biogas production	FMPHT Lab and Gazipur
	4.4 Design and development of low cost Biochar production technology using different agricultural by product	i.To develop a energy efficient biochar production technology & produce biochar using different agricultural by product ii.To evaluate the quality of produced biochar & select the optimum biochar production technology	FMPHT Lab and Gazipur
	4.5 Feasibility study of solar energy use in agricultural machinery	i.To study the suitability of solar energy use in agricultural machinery ii.To evaluate the aptness of solar energy use in agricultural machinery	FMPHT Lab and Gazipur
	4.6 Design, development and performance evaluation of briquetting machine using rice husk with different ration of maize steam	i.To design and develop a briquetting machine using rice husk with different ratio of maize steam. ii.To determine the physical and combustion properties of the final product. iii.To evaluate the performance of the briquetting machine.	FMPHT Lab and Gazipur
05	**Popularization of BRRI developed farm machinery and Postharvest technology**	i.Awareness build up about the benefit of using BRRI machines among the farmers ii.Motivation of the local manufacturer to manufacture the BRRI agricultural machinery	All over the country
	5.1: Industrial and farm level extension of BRRI machinery and Postharvest technology	i.To create awareness and demonstrate the benefit of using BRRI machines among the farmers	All over the country

		ii.To motivate the local entrepreneurs to manufacture BRRI developed machinery	
	5.2: Survey the status and constraint of farm machinery used in farmer's field at selected areas	i.To investigate the capacity of engineering workshop in agricultural machinery manufacturing; ii.To study the production and existing use level of agricultural machinery at different farm operations iii.To identify the limitations and prospects of engineering workshop at farm level.	All over the country
	5.3: Feasibility of combine harvester in different eco-condition in Bangladesh	To determine the technical and business model of combine harvester in different regions of Bangladesh.	BRRI R/S Sonagazi, Borishal, Satkhira
06	**Precision Agriculture**	**To apply ICT in Agriculture**	All over the country
	6.1: Development of machine vision approach in determination of paddy varieties	i.To develop machine vision algorithm in determination of particular paddy variety ii.To identify the variety analyzing image of paddy	All over the country

Agricultural Economics Division			
	Program Area: SOCIO ECONOMIC AND POLICY		
Sl. No	**Research Title**	**Objectives**	**Location**
1	Farm Level Adoption of Modern Rice Varieties in Bangladesh	i.Determine the region-wise adoption rate of different rice varieties in different seasons; and ii.Estimate the yield of different modern and local rice varieties.	14 agricultural regions
2.	Determinants of Adoption Decision of Aromatic Rice Varieties in Some Selected Areas of Bangladesh: An Econometric	i.To delineate adoption status and yield of aromatic rice; ii.To estimate profitability of aromatic and coarse rice varieties;	Jashore and Naogaon

	Approach	iii.To identify factors influencing adoption decision of aromatic rice varieties.	
3.	Estimation of Costs and Return of MV Rice Cultivation at the Farm Level	i.Delineate input use pattern in modern Aus, T. Aman and Boro rice cultivation; ii.Estimate the profitability of modern Aus, T. Aman and Boro rice cultivation at farm level.	14 Agricultural regions
4.	An Economic Investigation of Rice Seed Production Status in a Selected Area of Bangladesh	i.To examine the economics of TLS production of rice; ii.To analyze the factors responsible for farmer's decision to adopt commercial seed production; and, iii.To document the constraints of TLS production of rice.	Jessore
	Rice Marketing and Price Policy		
5.	Spatial Price Dynamics of Rice in Bangladesh: An Evidence from Time Series Analysis	To analyze short-run and long- run price relationships including market integration, price transmission and volatility among 12 major rice markets,	Secondary data of 12 major wholesale rice markets.
6.	Tracking rice varietal authentication: A pathway from farm to market	i.To identify different types of rice varieties available in the market and enlist those under different clusters ii.To sketch the logistic network of each cluster from origin to consumer iii.To identify the reasons of deviated names of rice varieties in the local market.	8Upazila markets and Two city markets (Dhaka and Gazipur)
7.	Resilience of Rice Value Chain: Recent Transformation and Vulnerabilities	i.Revisiting rice value chains in the face of recent transformations and disturbances ii.Scrutinizing the resilience and vulnerabilities of the rice value	Jessore region

		chain actors.	
	Agricultural Policy and Development		
8.	Understanding Climate Variability and Market Insight of rice in Haor Ecosystem	i.To assess the impact of climate variability on rice cultivation ii.To figure out farmers' coping and adaptation strategies to climate change iii.To estimate marketable and marketed surplus of rice and identify factors responsible for marketable surplus and iv. To derive policy implication.	Sunamgonj and Netrakona
9	Comparative Advantage of Export Potential Aromatic Rice Varieties in Bangladesh: The Case of BRRI dhan50	i.To examine the prospect of production of import and export potential aromatic rice (BRRI dhan50) variety in terms of export parity basis; ii.To review of international standard for rice export and way-out the link to export policy; iii.To draw some policy guidelines.	Jessore district
10.	Socio-economic vulnerability of climate change and adaptation strategies of the rice farm households in the flood prone areas of Bangladesh	i.Assessing perception of the rice farm households about climate change and variability; ii.Identification of adaptation strategies and barriers to adaptation of the vulnerable households in the face of climate change issues; and, iii.Assessment of livelihood vulnerability of households in hazards-prone areas.	Kurigram and Gaibandha
11.	Adoption determinants, profitability and resource use efficiency of stress tolerant rice in Selected Areas of Bangladesh: An Econometric Approach	i.To delineate adoption status and yield of stress tolerant rice varieties; ii.To estimate profitability and resource use efficiency of stress	Satkhira and Kurigram

		tolerant rice varieties; and, iii.To identify factors influencing adoption decision of stress tolerant rice varieties.	

Agricultural Statistics Division			
	Program Area: SOCIO ECONOMIC AND POLICY		
Sl. No	**Research Title**	**Objectives**	**Location**
1	Stability analysis of BRRI Varieties	i.To determine the stability index of BRRI varieties ii.To estimate location-wise stability index of BRRI varieties iii.To determine the stability index of BRRI varieties according to the growth duration iv.To find out the location-wise yield performance of BRRI varieties at different years v.To find out the overall yield performance of BRRI varieties at different locations and year. vi.Season, year and location wise database on BRRI varieties	BRRI HQ and all R/S of BRRI
2	Improvement of BRRI Stability model by incorporate multiple factors	i.To improve BRRI stability model ii.To incorporate multiple factors into stability model iii.To estimate location-wise stability index of BRRI varieties iv.To assess the trend of stability index for BRRI varieties. v.To estimate the effect of weather parameter on stability index of BRRI varieties	BRRI HQ and all R/S of BRRI

		vi.To compare BRRI stability model with other stability models (Eberhart and Russel model, AMMI model and Fuzzy log model etc.).	
3	Develop analytical skills on the scopes of Bioinformatics in Rice Research	i.Review the application of bioinformatics in rice research. ii.Develop analytical skills on the application of bioinformatics in rice research.	BRRI HQ
4	Statistical Modeling and RNA-seq data Analysis	i.To develop algorithms for quantification of the gene expression level. ii.To identify the differential expression genes (DEGs). To identify which DEGs were significantly involved in each Gene ontology (GO).	BRRI HQ
5	Comparative study for rice yield estimation by adjusting moisture content	i.To determine the adjustment factors for rice yield estimation. ii.To develop a criterion for performing a reliable estimation.	BRRI HQ
6	Genotype x Environment interaction of BRRI varieties	To Identify BRRI released rice genotypes that have both high mean yield and stable yield performance across different environments for different ecosystem of Bangladesh	BRRI HQ, and all regional stations
7	CV for estimating yield and yield contributing characters of BRRI varieties	i.To determine the acceptable limit of CV for biometric characters of rice varieties ii.To determine the relative contribution of phenotypic characters/yield contributing characters to rice yield iii.To review the existing experimental data	All over the country
8	Rice database and analysis system (RDAS)	i.To develop a web based integrated	All over the country

		framework on 'Rice Database and Analysis System (RDAS) ii.To create map and graph based on rice data.	
9	Maintenance of Rice and related Database	i.To maintain up-to-date computerized information on rice and related crops ii.To determine year wise GR of Rice Production in Bangladesh iii.To maintain up-to-date computerized information on climatic factors both BRRI regional stations and BMD stations data. To make comparison between BRRI stations and BMD stations data. iv.To produce various maps from these data	All over the country
10	Integrated weather forecasting and rice advisory system (IWFRAS) for sustainable productivity in Bangladesh	i.To develop an 'integrated weather forecasting and rice advisory system (IWFRAS)' for processing, assessing and validating forecast data, advisory generation and dissemination for operational service to the stakeholders. ii.To examine the forecast based rice crop management system through dissemination of IWFRAS activities. iii.To validate forecast based rice crop management research findings through farmers' participation using IWFRAS. iv.To assess the economic benefits of forecast based rice crop management system for wide	BRRI HQ, R/S of BRRI and farmer's field

		dissemination to the farmer's field.	
11	Suitability mapping of BRRI released varieties	To construct suitability map of BRRI released rice varieties (BRRI dhan93-98)	All over the country
12	Climate mapping of temperature and rainfall of Bangladesh	i.To determine expected maximum and minimum temperature and rainfall in different region for rice in Bangladesh ii.To determine areas of critical maximum and minimum temperature and rainfall map of Bangladesh for rice during the period and iii.To determine the changing trend of extreme climatic zone. .	All over the country
13	Zoning of BRRI released rice varieties	To construct upazila wise zonal map of BRRI released rice varieties	All over the country
14	Season wise rice area mapping of Bangladesh	i.To construct season wise rice area map of Bangladesh. ii.To estimate season wise rice area of Bangladesh iii.To validate and compare the rice database from various sources iv.To find out the best source of rice area data.	All over the country
15	Favorable and Unfavorable Rice Cultivation Area Mapping of Bangladesh	i.To construct favorable and unfavorable rice cultivation area map of Bangladesh. ii.To estimate favorable and unfavorable rice cultivation area of Bangladesh.	All over the country
16	Training Program on Experimental Data Analysis	i.To train up BRRI scientists on experimental data analysis using different statistical software. ii.To make BRRI scientists self-dependent on experimental data analysis.	BRRI HQ and all R/S of BRRI

		iii.To developed skills on research planning, program and report writing.	
17	Training program on multivariate data analysis	i.To train up BRRI scientists on multivariate data analysis using different statistical software. ii.To give clear and straightforward guideline of how to conduct experimental design for MVA. iii.To make BRRI scientists self-dependent on multivariate data analysis. iv.To developed skills on research planning, program and report writing.	BRRI HQ and all R/S of BRRI
18	Training program on experimental field layout, data collection and data preparation	i.To train up BRRI Scientific Assistant/Assistant Farm Manager on field experiment. ii.To self-dependent of BRRI Scientific Assistant/Assistant Farm Manager on experimental data collection techniques and processing. iii.Hands on training on data preparation systems using MS-Excel.	BRRI HQ and all R/S of BRRI
19	Training program on basic computer operation	i.To train up BRRI staff on basic computer operation. ii.To self-dependent of BRRI staff on computer operation. iii.Hands on training on basic computer and office application.	BRRI HQ and all R/S of BRRI
20	Develop a computer program using R to calculate the Stability Index for BRRI stability model	To develop a computer program using R to calculate the stability index for BRRI stability model.	BRRI HQ and all R/S of BRRI
21	Digitalized budget management	To develop a digital budget	BRRI HQ and all

	system of BRRI	management system for BRRI	R/S of BRRI
22	Digitalized quota management system of BRRI	To develop a digital quota management system for BRRI	BRRI HQ and all R/S of BRRI
23	Digitalized salary management system of BRRI	i.To update the digital salary management system of BRRI as user need. ii.Include all the BRRI HQEmployee in the Software	BRRI HQ and all R/S of BRRI
24	Digitalized labour management system of BRRI	To update "Labour Management System (LMS)" of BRRI as user need.	BRRI HQ and all R/S of BRRI
25	Digitalized casual leave application system	To develop a digital "Casual Leave Application System" for Agricultural Statistics Division	BRRI HQ and all R/S of BRRI
26	Sensor-based rice pest management through Artificial Intelligence (AI) technology of BRRI	i.To develop AI based mobile and web App for BRRI. ii.To identify AI scopes in rice research engaging scientists, extension worker and farmers. iii.To manage, maintain and host AI based mobile and web app at server.	All Bangladesh
27	Develop a new website for BRRI	i.To develop a new website for national and international seminars and symposiums. ii.To manage domain or sub-domain for the new website. iii.To host the new website at server. iv.To manage and maintain the new website.	All Bangladesh
28	Strengthening Cyber Security System for BRRI	i.To develop Virtual Private Network (VPN) for BRRI. ii.To develop VPN tunnel for BRRI. iii.To develop secure remote connectivity for BRRI.	All Bangladesh

		iv.To manage and maintain cyber security system	
29	"BRRI Alapon" Telephone Directory Mobile App of BRRI	i.To develop telephone directory mobile app for BRRI. ii.To communicate through mobile app via voice call, video call, email or SMS. iii.To provide location sharing through mobile app. iv.To provide all types of meeting, seminar etc notice via SMS through mobile app.	All Bangladesh
30	Vehicle Requisition Management System of BRRI	i.To develop vehicle requisition management system (VRMS) for BRRI. ii.To inform through SMS, on the basis of demand vehicle at BRRI. iii.To provide SMS for drivers for confirming their upcoming duty. iv. To host VRMS at server.	All Bangladesh
31	Training on Innovation, Service Process Simplification (SPS) and e-Nothi system for enhancing capacity of BRRI employee	i.To provide various training on public service innovation (PSI), SPS and e-Nothi system to BRRI scientists and officers for developing capacity. ii.To bring qualitative changes in the internal research work process and service delivery in BRRI HQ and respective regional stations. iii.To compile various innovative idea through PSI and SPS training for piloting and replication activities.	All Bangladesh
32	"BRRI Rice Doctor" Apps for BRRI	i.To diagnosis insect and pest through rice doctor Apps for BRRI.	All Bangladesh

		ii.To manage and maintain rice doctor apps. iii.To host rice doctor Apps at server.	
33	Strengthen and dissemination of modern rice technology and its management information at the farmer door step through RKB Mobile Apps	i.To develop and modify the design of RKB. ii.To manage and maintain RKB through regular updating of the information and documents.	All Bangladesh
34	BRKB website management	i.To develop and modify the design of BRKB Website. ii.To manage and maintain BRKB Website through regular updating of the information and documents.	All Bangladesh
35	Dynamic view connectivity system, Bangla searching system and inner banner system for BRKB Website	i.To construct dynamic view connectivity system. ii.To create Bangla searching system. iii.To develop inner banner system. iv.To manage and maintain BRKB Website through regular updating of the information and documents.	All Bangladesh
36	BRRI Web Mail and Group Mail	i.To create Web mail and Group mail id with password for all scientists and officers of BRRI. ii.To manage, maintain and update regularly as routine work web mail and group mail of BRRI.	All Bangladesh
37	Developing secure system for BRRI Web Mail and Group Mail	i.To develop spamming filtering system (SFS) at BRRI web mail server. ii.To develop automatic active & close system (AACS) at BRRI web mail server. iii.To develop Secure Sockets Layer (SSL).	All Bangladesh

38	Online Application System of BRRI	i.To develop "Online application system" for BRRI. ii.To host "Online application system" at data center. iii.To manage and maintain "Online application system" through regular updating of the information and documents.	All Bangladesh
39	e-Nothi System of BRRI	i.To setup "e-Nothi System" for BRRI Head Quarter and all Regional station(R/S) for establishing e-Governance. ii.To setup "e-Nothi System" for ensuring faster movement of files, hassle less and paperless office system. iii.To setup "e-Nothi System" for increasing transparency, accountability at BRRI.	All Bangladesh
40	LAN and internet connectivity of BRRI regional station(R/S)	i.To setup Local Area Network (LAN) for all regional station of BRRI. ii.To setup Internet connectivity for all regional station of BRRI. iii.To manage and maintain LAN & Internet connectivity of BRRI regional station.	BRRI R/S
41	BRRI Web Portal Management	i.To develop and modify the design of BRRI Web Portal. ii.To manage and maintain BRRI Web Portal through regular updating of the information and documents.	All Bangladesh
42	Management of BRRI HQ Local Area Network and Internet Connectivity	i.To increase the infrastructure of BRRI local Area Network. ii.To increase the bandwidth connectivity from 60 Mbps to 70 Mbps or more.	BRRI HQ

		iii.To manage and maintain ICT Network of BRRI.	
43	BRRI Networks Update, Maintenance and Extension	i.To increase and stimulate awareness to all visitors of Facebook group through 'BRRI Networks'. ii.To extend, boosting, manage, update and maintain 'BRRI Networks' facebook group and facebook page regularly. iii.To promote all activities, where only official interactions, various problems and theirs solutions can be posted.	All Bangladesh
44	Personal Data Sheet of BRRI	i.To develop "Personal Data Sheet (PDS)" database for all scientists, officers, clerks of BRRI. ii.To develop "Personal Data Sheet (PDS)" database using user name & password. iii.To get BACKUP of "Personal Data Sheet (PDS)" database regularly.	All Bangladesh
45	Video Conference System of BRRI (Skype system)	i.To develop "Video conference system of BRRI (Skype system)" for administration, all divisional head and regional station head of BRRI. ii.To develop "Video conference system of BRRI (Skype system)" for research, administration works and innovative interactions.	All Bangladesh
46	New version of management Information System (MIS) of BRRI	i.To develop new version of management Information System (MIS) Software for BRRI. ii.To manage and maintain MIS of BRRI iii.To host MIS software at	All Bangladesh

		Bangladesh computer council (BCC).	
47	Rice Pest Corner	i.To develop Rice Pest Corner for BRRI Website. ii.To develop a Web Application for Rice Pest Corner. iii.To manage and maintain Rice Pest Corner.	All Bangladesh
48	Heritage of BRRI	i.To develop "Heritage" for all scientists, all officers, all clerks, and all workers of BRRI. ii.To develop "Heritage "for research and administration works. iii.To create and stimulate awareness amongst the present employees of BRRI about ex. Scientists and officer's great activity.	All Bangladesh

Farm Management Division			
	Program Area: SOCIO ECONOMIC AND POLICY		
Sl. No	**Research Title**	**Objectives**	**Location**
1	Yield maximization of rice through integrated nutrient management.	To find out the suitable management practice for yield maximization of rice and soil health.	BRRI, Gazipur
2	Efficacy of mechanical deep placement of mixed fertilizer and seedling transplanting on rice yield.	To evaluate the efficacy of newly developed mechanical rice transplanter cum fertilizer applicator.	BRRI, Gazipur
3	Effect of foliar application of silicon on yield of aromatic rice.	To investigate the effect of foliar application of silicon's aqueous solution (sodium silicate) on yield of aromatic rice.	BRRI, Gazipur
4	Effect of land size and condition on the performance of BRRI hydro-tiller at BRRI farm,	To identify the land-machine relation and recommend the machine for suitable land.	BRRI, Gazipur

	Gazipur.		
5	Performance of BRRI released rice varieties at BRRI farm, Gazipur.	To find out the maximum yield of specific variety.	BRRI, Gazipur
6	Assessment of Health issues of laborers at BRRI farm.	i.To examine the biological, psychological, and social health of labors in BRRI farm. ii.To determine the factors that might affect the health of labors at BRRI. iii.To suggest the policy recommendations for ensuring safety measures in terms of health hazards.	BRRI, Gazipur
7	Evaluation of laborer's efficiency according to their age at BRRI HQ, Gazipur.	To identify age based laborer's efficiency for better management of rice cultivation.	BRRI, Gazipur
8	Documentation of laborers' wage for efficient management and planning for rice Cultivation.	To find out the laborers' wage for rice cultivation throughout Bangladesh with food and without food.	Districts around BRRI HQ and Regional stations.
9	TLS and Breeder seed production	To supply quality seed for seed demand of breeder seed and TLS	BRRI, Gazipur
10	Management and utilization of land, labor and other resources (Management of land, labor, farm implements, flower garden, irrigation and drainage etc.).	Better utilization of farm land, labor and other resources for smooth running of research activities of BRRI.	BRRI, Gazipur

Adaptive Research Division			
	Program Area: TECHNOLOGY TRANSFER		
Sl. No	**Research Title**	**Objectives**	**Location**
1	**Technology Validation**	To validate the technologies in different agro-echological zone	Throughout Bangladesh

1.0	Advanced Line Adaptive Research Trial (ALART)	i.To evaluate the yield potential and adaptability of advanced breeding lines at farmers' field in different agro-ecological conditions. ii.To get feedback information about the advantages and disadvantages of the advanced lines from farmers and DAE personnel.	
1.1	Early T. Aman 2021, ALART Stagnant Water (SW)	i.To evaluate the yield potential and adaptability of advanced breeding lines at farmers' field in different agro-ecological conditions. ii.To get feedback information about the advantages and disadvantages of the advanced lines from farmers and DAE personnel.	10: Gazipur (Sadar), Cumilla (Langolkot), Jashore (Keshobpur), Gopalganj (Sadar). Barishal (Char Badna farm), Satkhira (Sadar), Chandpur (Kachua), Rangpur (Kaunia), Kurigram (Rajarhat), Gazipur (Sreepur)
1.2	T. Aman 2021, ALART, Insect Resistant Rice-Brown Plant Hopper (IRR-BPH)	i.To evaluate the yield potential and adaptability of advanced breeding lines at farmers' field in different agro-ecological conditions. ii.To get feedback information about the advantages and disadvantages of the advanced lines from farmers and DAE personnel.	10: Satkhira (Sadar), Sirajganj (Raiganj), Kurigram (Rajarhat), Kurigram (Sadar), Gaibandha (Polashbari), Rangpur (Mithapukur), Lalmanirhat(Sadar), Lalmanirhat (Kaliganj), Khulna (Koyra), Gazipur (West Byde).
1.3	T. Aman 2021, ALART, Salt tolerant rice (STR)	i.To evaluate the yield potential and adaptability of advanced breeding lines at farmers' field in different agro-ecological conditions. ii.To get feedback information about the advantages and disadvantages of the advanced	10: BRRI (Gazipur), Satkhira (Sadar and Kaliganj), Khulna (Dumuria and Batiaghata), Patuakhali (Kalapara), Feni (Sonagazi), Noakhali

		lines from farmers and DAE personnel.	(Companiganj) and Bagerhat (Sadar and Rampal).
1.4	T. Aman 2021, ALART for submergence tolerance rice; Short duration (SubTR-SD)	i.To evaluate the yield potential and adaptability of advanced breeding lines at farmers' field in different agro-ecological conditions. ii.To get feedback information about the advantages and disadvantages of the advanced lines from farmers and DAE personnel.	10: Chattogram (Mirsharai) Lalmonirhat (Sadar), Lalmonirhat (Aditmari), Kurigram(Sadar), Gaibandha (Palashbari), Rangpur (Kaunia), Rangpur regional station research field (RSRF), Rangpur (water tank), Gazipur (West byde) and Gazipur (water tank).
1.5	T. Aman 2021, ALART for submergence tolerance rice	i.To evaluate the yield potential and adaptability of advanced breeding lines at farmers' field in different agro-ecological conditions. ii.To get feedback information about the advantages and disadvantages of the advanced lines from farmers and DAE personnel.	10: Chattogram (Mirsharai), Lalmonirhat (Sadar), Lalmonirhat (Aditmari), Kurigram(Sadar), Gaibandha (Palashbari), Rangpur (Kaunia), Rangpur regional station research field (RSRF), Rangpur (water tank), Gazipur (West byde) and Gazipur (water tank).
1.6	T. Aman 2021, ALART, Zinc enriched rice (ZER):	i.To evaluate the yield potential and adaptability of advanced breeding lines at farmers' field in different agro-ecological conditions. ii.To get feedback information about the advantages and disadvantages of the advanced lines from farmers and DAE personnel.	10: Kushtia (Sadar), Habiganj (Bahubol), Rajshahi (Paba), Cumilla (Debidwar), Jhalkathi (Nalchiti), Faridpur (Nagarkanda), Rangpur (Mithapukur), Feni (Sonagazi), Satkhira (Sadar) and BRRI

			Gazipur (West Byde).
1.7	Boro 2022, ALART, Premium Quality Rice (PQR)	i.To evaluate the yield potential and adaptability of advanced breeding lines at farmers' field in different agro-ecological conditions. ii.To get feedback information about the advantages and disadvantages of the advanced lines from farmers and DAE personnel.	10: BRRI research farm (Gazipur), Rangpur (Sadar), Rangpur (Mithapukur), Rajshahi (Paba), Rajshahi (Godagari), Sirajganj (Sadar), Cumilla (Debiddar), Feni (Sadar), Kushtia (Sadar) and Habiganj (Sadar).
1.8	Boro 2022, ALART, Salt tolerant rice (STR-1)	i.To evaluate the yield potential and adaptability of advanced breeding lines at farmers' field in different agro-ecological conditions. ii.To get feedback information about the advantages and disadvantages of the advanced lines from farmers and DAE personnel.	10: BRRI research farm (Gazipur), Satkhira (Assasuni, Kaliganj and Debahata), Patuakhali (Kalapara), Barguna (Amtali), Feni (Sonagazi), Noakhali (Companiganj) and Bagerhat (Rampal) and Gopalganj (Tongipara).
1.9	Boro 2022, ALART, Salt tolerant rice (STR-2	i.To evaluate the yield potential and adaptability of advanced breeding lines at farmers' field in different agro-ecological conditions. ii.To get feedback information about the advantages and disadvantages of the advanced lines from farmers and DAE personnel.	10: BRRI research farm (Gazipur), Satkhira (Assasuni, Kaliganj and Sadar), Patuakhali (Kalapara), Barguna (Amtali), Feni (Sonagazi), Noakhali (Companiganj) and Bagerhat (Rampal) and Gopalganj (Tongipara).
1.10	Boro 2022, ALART, Cold Tolerant Rice (CTR)	i.To evaluate the yield potential and adaptability of advanced breeding lines at farmers' field in different agro-ecological conditions.	10: BRRI research farm (Gazipur West byde); Kishoreganj (Karimganj, Mithamoin, Itna,

		ii.To get feedback information about the advantages and disadvantages of the advanced lines from farmers and DAE personnel.	Nikli); Netrokona (Mohonganj, Modon); Habiganj (Baniachang, Ajmeriganj) and Sunamganj (Taherpur).
1.11	Boro 2022, Favorable Boro Rice-Barishal (FBR-Barishal):	i.To evaluate the yield potential and adaptability of advanced breeding lines at farmers' field in different agro-ecological conditions. ii.To get feedback information about the advantages and disadvantages of the advanced lines from farmers and DAE personnel.	12: Gopalganj (Kotalipara), Faridpur (Sadar), Barishal (Aghailjihara), Natore (Naldanga), Sirajganj (Tarash), Brahmonbaria (Kasba), Feni (Fulgazi), Kushtia (Sadar), Habiganj (Baniachang), Mymensingh (Sadar) and BRRI research farm Gazipur)
1.12	Boro 2022, ALART, Blast Resistant Rice (BRR)	i.To evaluate the yield potential and adaptability of advanced breeding lines at farmers' field in different agro-ecological conditions. ii.To get feedback information about the advantages and disadvantages of the advanced lines from farmers and DAE personnel.	11: Faridpur, Barishal, Rajshahi, Rangpur, Dinajpur, Sirajganj, Cumilla, Kushtia, Habiganj, Satkhira and Gazipur)
1.13	Boro 2022, ALART Superior High Yielding Rice (SHR	i.To evaluate the yield potential and adaptability of advanced breeding lines at farmers' field in different agro-ecological conditions. ii.To get feedback information about the advantages and disadvantages of the advanced lines from farmers and DAE personnel.	12 : Gopalganj (Sadar), Sirajganj (Kamarkhanda), Gazipur (WB), Rajshahi (Paba), Habiganj (Baneachong), Satkhira (Sadar), Kushtia (Sadar), Rangpur (Mithapukur), Cumilla (Debidwar), Barishal (Sadar),

			Bhanga (Nagarkanda) and Feni (Sonagazi).)
2	**Technology Dissemination**		
2.1	Seed Production and Dissemination Program (SPDP) during B. Aus, 2021 under GoB	i. To motivate farmers to produce quality seeds of the BRRI varieties and exchange among other farmers for rapid dissemination of varieties. ii.To collect feedback information about BRRI varieties and other technologies	Twelve (12) demonstrations were conducted on SPDP during B.Aus 2021 at 6 upazilas of Bhola districts under GoB
2.2	SPDP) during T. Aus, 2021 under GoB	i. To motivate farmers to produce quality seeds of the BRRI varieties and exchange among other farmers for rapid dissemination of varieties. ii.To collect feedback information about BRRI varieties and other technologies	87 SPDPs were conducted in different agro-ecological regions of the country covering in 25 upazilas of 12 districts
2.3	Dissemination of BRRI Hybrid dhan7 during T. Aus, 2021	i. To motivate farmers to produce quality seeds of the BRRI varieties and exchange among other farmers for rapid dissemination of varieties. ii.To collect feedback information about BRRI varieties and other technologies	28 Demonstrations were conducted during T. aus 2021 at 14 upazilas of 5 districts (Chuadanga, Bhola, Borguna, Manikganj, Gaibandha)
2.4	Performance of BRRI dhan98 during T. Aus, 2021	i. To motivate farmers to produce quality seeds of the BRRI varieties and exchange among other farmers for rapid dissemination of varieties. ii.To collect feedback information about BRRI varieties and other technologies	Three special-SPDPs were conducted in Sylhet (S. Surma), Manikganj (Harirampur) and Gaibandha (Palashbari)
2.5	SPDP in Jhum cultivation during Aus 2021	i. To motivate farmers to produce quality seeds of the BRRI varieties and exchange among other farmers for rapid dissemination of varieties.	9 SPDPs were conducted in Jhum cultivation in three upazilas of three districts of hill tracts during T. Aus 2021

		ii.To collect feedback information about BRRI varieties and other technologies	
2.6	SPDP in valley of hills during T. Aus 2021	i. To motivate farmers to produce quality seeds of the BRRI varieties and exchange among other farmers for rapid dissemination of varieties. ii.To collect feedback information about BRRI varieties and other technologies	9 SPDPs were conducted in Valley cultivation in three upazilas of three districts of hill tracts during T. Aus 2021
2.7	SPDP during T. Aman, 2021 under GoB	i. To motivate farmers to produce quality seeds of the BRRI varieties and exchange among other farmers for rapid dissemination of varieties. ii.To collect feedback information about BRRI varieties and other technologies	803 SPDPs of modern rice varieties in T. Aman 2021 under GoB were conducted in different agro-ecological regions of the country covering in 68 upazilas of 26. Plot size of each variety was 1 bigha in each block of each upazila
2.8	Performance of BRRI dhan71 and BRRI dhan75 in T. Aman-Potato-Boro cropping pattern during T. Aman 2021	i. To motivate farmers to produce quality seeds of the BRRI varieties and exchange among other farmers for rapid dissemination of varieties. ii.To collect feedback information about BRRI varieties and other technologies	16 SPDPs in 8 upazilas of 4 districts (Nilphamari, Thakurgaon, Joypurhat and Bagura)
2.9	Performance of BRRI hybrid dhan4 and BRRI hybrid dhan6 in different locations during T. Aman 2021	i. To motivate farmers to produce quality seeds of the BRRI varieties and exchange among other farmers for rapid dissemination of varieties. ii.To collect feedback information about BRRI varieties and other technologies	34 Demonstrations were conducted during T. Aman 2021 at 17 upazilas of 9 districts
2.10	Performance of BRRI dhan80 and BRRI dhan87 in hill tracts during T. Aman 2021	i. To motivate farmers to produce quality seeds of the BRRI varieties and exchange among other farmers	6 upazilas of 3 districts

		for rapid dissemination of varieties. ii.To collect feedback information about BRRI varieties and other technologies	
2.11	Special SPDP (Muzibborsho) in T. Aman, 2021	i. To motivate farmers to produce quality seeds of the BRRI varieties and exchange among other farmers for rapid dissemination of varieties. ii.To collect feedback information about BRRI varieties and other technologies	84 Special SPDPs were conducted in 14 upazials of 11 of Bangladesh
2.12	Performance of BRRI dhan91 in different locations during Early T. Aman 2021	i. To motivate farmers to produce quality seeds of the BRRI varieties and exchange among other farmers for rapid dissemination of varieties. ii.To collect feedback information about BRRI varieties and other technologies	39 SPDPs were conducted in low land areas of Manikganj, Narayanganj, Munsigang, Pabna and B.Baria districts
2.13	Program (SPDP) during T. Aman, 2021 under TRB	i. To motivate farmers to produce quality seeds of the BRRI varieties and exchange among other farmers for rapid dissemination of varieties. ii.To collect feedback information about BRRI varieties and other technologies	60 SPDPs were conducted in 16 upazila of 13 districts
2.14	SPDPs in Boro 2022	i. To motivate farmers to produce quality seeds of the BRRI varieties and exchange among other farmers for rapid dissemination of varieties. ii.To collect feedback information about BRRI varieties and other technologies	703 demonstrations were established in 27 upazilas of 13 districts (Tangail, Gazipur, Narshingdhi, Manikganj, Kishoreganj,Mymensingh, Netrokona, Sherpur, Bagerhat, Gaibandha, Khagrachari, Bandarban,

			Rangamati)
2.15	SPDP in Boro 2022 under TRB	i. To motivate farmers to produce quality seeds of the BRRI varieties and exchange among other farmers for rapid dissemination of varieties. ii.To collect feedback information about BRRI varieties and other technologies	66 SPDPs were conducted in 16 upazila of 10 districts (Gazipur, Netrakona, Mymensingh,Khuln, Chuadanga, Norsingdhi, Kishoreganj, Baguraand, Bandaarban)
2.16	Head to Head Adaptive Trial (HHAT) during T. Aman 2021 under TRB:	i. to validate the adaptability of modern rice varieties in different environments at farmers' field ii. To investigate the performance of promising varieties compared to popular mega variety iii. To select suitable variety(s) for target environments iv. Rapid dissemination of promising rice varieties	200 Head to Head Adaptive Trials (HHAT) were conducted in Aman (wet season) 2021 throughout the country
2.17	Head-to-Head Adaptive Trial (HHAT) during Boro 2022 under TRB:	i. to validate the adaptability of modern rice varieties in different environments at farmers' field ii. To investigate the performance of promising varieties compared to popular mega variety iii. To select suitable variety(s) for target environments iv. Rapid dissemination of promising rice varieties	200 Head-to-Head Adaptive Trials (HHAT) were conducted in Boro 2022 throughout the country
3	**Promotional Activities**	To create awareness, interest and improve farmers' skills and knowledge for adoption of modern rice production technologies	
3.1	Farmers' training	i.To update knowledge and skills of farmers on modern rice production technologies. ii.To enhance dissemination of new technologies among the farmers.	113 one-day farmers training was conducted during 2021-22 throughout the country
3.2	Field day	i.To create awareness and interest	71 Field days were

		among farmers, local leaders, elite persons, NGO workers and DAE personnel about BRRI varieties and technologies. ii.To promote dissemination and get feedback about BRRI technologies from farmers.	conducted during 2021-22 throughout the country
3.3	Farmers's Seed Centre	To update knowledge and skills of farmers group on modern rice production technologies	Four farmers' seed centers were established in Gaibandha and Gazipur during the reporting period.
3.4	Seed support to farmers and stake holders under TRB project	To promote dissemination of BRRI varieties	ARD distributed 1.50 tons seeds among the farmers and stakeholders
4	**Enrichment of own seed stock**		
4.0	SEED production at BRRI farm	To produce quality seeds of BRRI released promising rice varieties for conducting adaptive research trials throughout the country during 3 seasons.	A total of 5230 kg and 2550 kg quality seeds of different BRRI varieties were produced at BRRI farms during T. Aman 2021 and Boro 2022 respectively

Training Division			
	Program Area: TECHNOLOGY TRANSFER		
Sl. No	**Research Title**	**Objectives**	**Location**
1.	Training on Modern Rice Production Technologies and communication- for BRRI Scientists	To acquire and enrich knowledge on: ▪ Modern rice production technologies ▪ Identification of field problems of rice cultivation and its solutions ▪ Research planning and execution. ▪ Data collection, analysis and interpretation ▪ Report/scientific article	Training Complex Building, BRRI

		writing and presentation ▪ Service rule and job description. ▪ Help extension personnel for quick dissemination of rice production technologies	
2.	Training on Modern rice production technologies for SAAO of DAE	To train the extension agents so that they can: ▪ Able to use and disseminate modern rice production technologies and ▪ Identify and solve the field problems of rice cultivation and help the farmers to increase productivity.	Training Complex Building, BRRI
3.	Training on Advanced Research Data Management and Refresh of Scientific Report Writing for BRRI Scientists	At the end of the course the participants will have developed their skills in organizing scientific paper & preparing each part of the paper to communicate scientific information effectively	Training Complex Building, BRRI
1.	Training on Modern Rice Production Technologies and communication- for BRRI Scientists	To acquire and enrich knowledge on: ▪ Modern rice production technologies ▪ Identification of field problems of rice cultivation and its solutions ▪ Research planning and execution. ▪ Data collection, analysis and interpretation ▪ Report/scientific article writing and presentation ▪ Service rule and job description and ▪ Help extension personnel for quick dissemination of rice production technologies	Training Complex Building, BRRI
2.	Training on Modern rice production technologies for SAAO of DAE	To train the extension agents so that they can: ▪ Able to use and disseminate modern rice production technologies and ▪ Identify and solve the field problems of rice cultivation and	Training Complex Building, BRRI

		help the farmers to increase productivity.	
3.	Training on Advanced Research Data Management and Refresh of Scientific Report Writing for BRRI Scientists	At the end of the course the participants will have developed their skills in; organizing scientific paper & preparing each part of the paper to communicate scientific information effectively	Training Complex Building, BRRI
4.	Training on Modern Rice Production technologies and Rice Based Farming System for SAAO of Hill tract region	To train the SAAO of hill region, so that they can: ▪ Able to use and disseminate modern rice production technologies and ▪ Identify and solve the field problems of rice cultivation and help the farmers to increase productivity.	Training Complex Building, BRRI
5.	Training on hybrid rice cultivation and seed Production Technologies for SAAO		Training Complex Building, BRRI
6.	Farmers Training on Modern Rice Production Technologies	To trained the farmers so that they can ▪ Apply the modern rice production technologies in their field ▪ Identify field problems solve the problem by himself	Farm area in different location of Bangladesh

Program Area: REGIONAL STATION			
Regional Station, Cumilla			
Sl. No	**Research Title**	**Objectives**	**Location**
1	Hybridization	Introgression of genes from diverged genetic background into rice varieties/lines for the improvement of standard T. Aman varieties	BRRI R/S, Cumilla
2	Confirmation of F_1	To confirm the crosses as true hybrid	BRRI R/S, Cumilla
3	Growing of F_2 population	Selection of progenies with emphasis on earliness, plant type,	BRRI R/S, Cumilla

		grain type and high yield potential compared to standard check varieties	
4	Pedigree nursery	Selection of progenies with improved plant type, earliness, acceptable grain quality and high yield potential compared to standard varieties	BRRI R/S, Cumilla
5	Observational Yield Trial (OYT)	Initial yield evaluation of advanced lines compared to standard checks	BRRI R/S, Cumilla
6	Preliminary Yield Trial (PYT)	Preliminary yield evaluation of advanced lines compared to standard checks	BRRI R/S, Cumilla
7	Advanced Yield Trial-1 (AYT-1)	Evaluation of advanced breeding lines compared to standard checks	BRRI R/S, Cumilla
8	Advanced Yield Trial-2 (AYT-2)	Evaluation of advanced breeding lines compared to standard checks	BRRI R/S, Cumilla
9	Advanced Yield Trial-3 (AYT-3) (Water Stagn)	Evaluation of advanced breeding lines compared to standard checks	BRRI R/S, Cumilla, Gazipur
10	Maintenance breeding	Conservation of advanced lines and pre-breeding materials	BRRI R/S, Cumilla
11	Survey and yield loss assessment of rice blast disease in Cumilla district	i.To know the prevalence of Major rice disease blast ii. To assume the rice yield losses due to rice diseases	BRRI R/S, Cumilla
12	Validation of rice neck blast disease management technology under farmer's field condition	i. To minimize yield loss due to blast disease ii. To build up farmers awareness on blast disease management	Cumilla
13	Varietal reaction and recovering ability of BRRI released rice varieties	To know the varietal reaction against tungro disease of rice	BRRI R/S, Cumilla
14	Factors affecting rice tungro disease and validation of the management technology in	To find out the factors and validate the management technology of rice tungro disease in Cumilla	NangalKot, Laksam, Chandina, Debidwar in Cumilla; Kasba in

	Cumilla region	region	B Baria
15	Tracking the infection source(s) of rice false smut disease	To identify whether the seed/soil and/ or the air is/are the carrier of the pathogen or not	Cumilla
16	Effectiveness of formulated biopesticides to control bakanae disease of rice in field condition	To evaluate field efficacy of formulated biopesticides against bakanae disease of rice	Debidwer, Cumilla
17	Evaluation of new chemicals against Blast, Sheath blight diseases of rice	To find out the effective chemicals suitable for Blast, ShB diseases of rice.	Cumilla
18	Multi-Location Trial (MLT) of blast resistant advanced lines	To evaluate specific and general adaptability of the advance breeding lines as compared with standard checks	Debidwar, Cumilla
19	Evaluation of blast resistant lines	To find out the blast resistant lines in blast hot-spot area in Cumilla region	Debidwar, Cumilla
20	Advisory services to the farmers	To assist farmers for rice production;	Cumilla, Chadpur& B. Baria
21	Effect of polythene covering on seedling raising in Boro season	To identify the suitable techniques for protecting rice seedlings from cold injury	BRRI R/S, Cumilla
22	Study on biodegradation of soil-applied herbicides in soil using selected microbial strain	i.To investigate the effect of pesticides on bacterial survivability in soil ii.To investigate the role of bacteria on degradation of soil applied pesticides.	Agronomy division, BRRI Gazipur
23	Study on physico-chemical properties and microbial population in soil of different rice growing areas of Cumilla region	i.To determine the physico-chemical properties of soil. ii.To determine the microbial status in soil	BRRI, Cumilla & Agronomy division, BRRI Gazipur
24	Influence of planting spacing and seedling age on dry matter partitioning of rice in boro season	i.To observe the effect of planting spacing on dry matter partitioning of BRRI dhan96 ii.To observe the effect of seedling	BRRI R/S, Cumilla

		age on dry matter partitioning of BRRI dhan96	
25	Effect of time of planting on growth and yield of BRRI developed newly T. Aman and Boro varieties (new)	To find out the appropriate time of planting for yield optimization	BRRI R/S, Cumilla
26	Effects of Potassium Fertilization at Different Growth Stages on growth and yield of rice	To find out the effect of potassium fertilization at different growth stages of Rice	BRRI R/S, Cumilla
27	Long-term missing element trials for diagnosing the limiting nutrient in soil in BRRI R/S Cumilla	i.To determine nutrient deficiency problems in soil. ii.To observe long-term yield trend of rice. iii.To evaluate the changes in soil properties under long-term rice culture	BRRI R/S, Cumilla
28	Effects of P rates on the yield of BRRI released new varieties/ advanced lines in BRRI Farm Cumilla	To update the P rates of BRRI released new varieties/ advanced lines in BRRI Farm Cumilla	BRRI R/S, Cumilla
29	Determination of appropriate time of DAP application to control Algal growth	i.To find out the appropriate time of DAP application ii.To control the algal growth in the rice field.	BRRI R/S, Cumilla
30	Stability analysis of BRRI released rice varieties	To demonstrate the suitability of BRRI varieties in greater Cumilla region	BRRI Cumilla farm
31	Multilocation trial of different BRRI varieties in major cropping patterns	To demonstrate and disseminate BRRI varieties in greater Cumilla region	Cumilla, B. Baria, Chandpur
32	Farmer's and SAAOs training on modern rice cultivation and disease management technology	To increase farmers knowledge	Cumilla, B. Baria, Chandpur
33	Field day on modern rice cultivation	To increase farmers knowledge	Cumilla, B. Baria, Chandpur

Regional Station, Barishal			
Sl. No	**Research Title**	**Objectives**	**Location**
1	Hybridization, T. Aman 2021	Variety development	Sagordi farm, Barishal
2	F_1 confirmation	Variety development	Sagordi farm, Barishal
3	Growing of F_2 population during T. Aman 2021	To select suitable progenies	Charbodna farm, Barishal
4	Growing of F_6 generation, T. Aman 2021	To select suitable fixed lines for further process (OYT)	Charbodna farm, Barishal
5	Observational Yield Trial (OYT), T. Aman 2021	To select suitable fixed lines for Aman season with dense & erect panicle, strong culm, high yield potential and disease & insect resistant at field condition for further process (PYT).	Sagordi +Charbodna farm, Barishal
6	Preliminary Yield Trial-1	To evaluate the specific and general adaptability of the advanced lines as compared with standard checks in on-station condition at Charbadna farm, Barishal.	Charbadna farm, Barishal
7	Preliminary Yield Trial-2	To evaluate the specific and general adaptability of the advanced lines as compared with standard checks in on-station condition at Charbadna farm, Barishal.	Charbadna farm, Barishal
8	Advanced Yield Trial	To evaluate the specific and general adaptability of the advanced lines as compared with standard checks in on-station condition at Charbadna farm, Barishal.	Charbadna farm, Barishal
9	Hybridization (Boro)	Variety development	Sagordi farm,

			Barishal
10	F1 confirmation	Variety development	Sagordi farm, Barishal
11	Generation Advancement of Pedigree nursery	Variety development	Charbadna farm, Barishal
12	New Generation Rice	Variety development	Sagordi farm, Barishal
13	New Generation Rice (Extra-bulk)	Variety development	Sagordi farm, Barishal
14	New Generation Rice (Hill selection)	Variety development	Sagordi farm, Barishal
15	Growing hybrids in advanced generation	Variety development	Charbadna farm, Barishal
16	Observational Yield Trial (OYT)	Variety development	Charbadna farm, Barishal
17	Preliminary Yield Trial (PYT)	Variety development	Charbadna farm, Barishal
18	Advance Yield Trial (AYT) Favourable Boro (Early)	Variety development	Charbadna farm, Barishal
19	Advance Yield Trial (AYT) Favourable Boro (Late)	Variety development	Charbadna farm, Barishal
20	New Generation Rice (Barishal)	Variety development	Sagordi farm, Barishal
21	Regional Yield Trial (RYT) RYT-AGGRInet	Variety development	Charbadna farm, Barishal
22	Regional Yield Trial (RYT) RYT FBR(SD)	Variety development	Charbadna farm, Barishal
23	Regional Yield Trial (RYT) RYT FBR(MD)	Variety development	Charbadna farm, Barishal
24	Regional Yield Trial (RYT)	Variety development	Charbadna farm,

	RYT FBR(LD)		Barishal
25	RYT STR-1	Variety development	Patuakhali
26	RYT STR-2	Variety development	Patuakhali
27	RYT DRR-(BB)	Variety development	Charbadna farm, Barishal
28	RYT DRR-2	Variety development	Charbadna farm, Barishal
29	RYT IRR (BPH)	Variety development	Charbadna farm, Barishal
30	RYT (FB)	Variety development	Sagordi farm, Barishal
31	RYT-SHYR-1 (SS)	Variety development	Sagordi farm, Barishal
32	RYT-SHYR-2 (LS)	Variety development	Sagordi farm, Barishal
33	RYT(FB-Bio)	Variety development	Charbadna farm, Barishal
34	RYT (ZER)	Variety development	Charbadna farm, Barishal
35	ALART STR-1 (two locations)	Variety development	Kolapara and Kuakata
36	ALART STR-2(two locations)	Variety development	Kolapara and Kuakata
37	Bacaterial Blight Resistant	Variety development	Sadar, Barishal
38	Superior High Yielding Rice	Variety development	Sadar, Barishal
39	ALART-Barishal (FB)	Variety development	Sadar, Barishal
40	National Hybrid Rice Yield Trial	Variety development	Charbadna farm, Barishal
41	Confined Field Trail (CFT-HIZR)	Variety development	Sagordi farm, Bbarishal
42	IIRON	Variety development	Charbadna farm,

			Barishal
43	Breeder Seed Production	To produce genetically purified seeds of released varieties	Sagordi farm, Barishal
44	Truthful Level Seed (TLS)	To produce bulk amount of seeds to supply to the farmers.	Charbadna farm, Barishal
45	Pest monitoring at BRRI Barishal Farms	To know the existing and new pest species	Sagordi & Charbodna farm, Barishal
46	Insect pests and natural enemies in light trap	To quantify the population of insects and natural enemies	Sagordi farm, Barishal
47	Survey of rice insect pest in Seedbed	To find the incidence patterns of major insects and natural enemies	Sagordi & Charbodna farm, Barishal
48	Developed a Rectangular hand net for insecticide free rice seedbed	To develop high insect pest caught efficiency hand net for insecticide free rice seedlings production in seedbed.	Sagordi & Charbodna farm, Barishal
49	Performance of Rectangular Hand Net in seedbed	To compare insect caught efficiency with round hand net	Charbadna farm Barishal
50	Rat caught efficiency of different Rodenticides	To find out the effective rodenticide among market available for rat control	Sagordi & Charbodna farm, Barishal
51	Insecticide free rice production in BRRI, Barishal	To find out effectiveness of cultural practices in absence of insecticide use to manage insects in rice fields.	Sagordi +Charbodna farm, Barishal
52	Yellow stem borer pheromone lure perfomance of different variety	To check yellow stem borer pheromone trap efficacy of different Aus variety	Charbadna farm Barishal
53	Demonstration of BRRI varieties	Popularization of BRRI released varieties.	Patukhali, Jhalkathi, Pirojpur, Borguna, Bhola, Barishal sadar
54	Head to Head Adaptive Trial	Popularization of newly released BRRI varieties	Kalapara, Amtoli

Regional Station, Rajshahi			
Sl. No	**Research Title**	**Objectives**	**Location**
	T. Aus 2021		
1	OYT (under TRB Project)	To understand and select the best performing breeding lines with highest genetic merits.	BRRI R/S, Rajshahi
2	PYT (under TRB Project)	Initial yield evaluation and selection of desirable lines compared to standard checks.	BRRI R/S, Rajshahi
	T.Aman 2021		
3	Hybridization	To develop drought tolerance high yielding genotypes	BRRI R/S, Rajshahi
4	F1 Confirmation	High yield, drought tolerant & acceptable grain type	BRRI R/S, Rajshahi
5	Growing Segregating Population (F2-F6)	To develop drought and cold tolerant rice	BRRI R/S, Rajshahi
6	Germplasm Collection and Evaluation	To characterize and maintain the local germplasm	BRRI R/S, Rajshahi
7	Maintenance Breeding Parents	To use in crossing program.	BRRI R/S, Rajshahi
8	Multi location Trial (DRR-BB)	Evaluation of genotypes for specific and general adaptability in on-station condition.	BRRI R/S Rajshahi, Paba, Alimgonj, Rajshahi
9	RYT#1 (RLR-1)	Evaluation of genotypes for specific and general adaptability in on-station condition.	BRRI R/S, Rajshahi
10	RYT#2 (RLR-2)	Evaluation of genotypes for specific and general adaptability in on-station condition.	BRRI R/S, Rajshahi, Naogoan, Nachole
11	RYT#3 (ZER)	Evaluation of genotypes for specific and general adaptability in on-station condition.	BRRI R/S, Rajshahi
12	RYT#4 (DTR)	Evaluation of genotypes for specific and general adaptability in on-station condition.	BRRI R/S, Rajshahi, Paba, Alimgonj, Rajshahi
13	RYT#5 (STR-1)	Evaluation of genotypes for	BRRI R/S, Rajshahi

		specific and general adaptability in on-station condition.	
14	RYT#6 (STR-2)	Evaluation of genotypes for specific and general adaptability in on-station condition.	BRRI R/S, Rajshahi
15	RYT#7 (Extra-long slender)	Evaluation of genotypes for specific and general adaptability in on-station condition.	BRRI R/S, Rajshahi, Naogoan, Paba, Rajarbari
16	RYT#8 (Long slender)	Evaluation of genotypes for specific and general adaptability in on-station condition.	BRRI R/S, Rajshahi, Naogoan, Paba, Rajarbari
17	RYT#9 (Short slender)	Evaluation of genotypes for specific and general adaptability in on-station condition.	BRRI R/S, Rajshahi, Naogoan, Paba, Rajarbari
18	AYT#1 (DTR)	To understand and select the best performing breeding lines with highest genetic merits.	Paba, Alimgonj, Rajshahi
19	AYT#2 (Drought and STRASA materials)	To understand and select the best performing breeding lines with highest genetic merits.	Paba, Alimgonj, Rajshahi
20	OYT (DDR-BB) (under TRB Project)	To understand and select the best performing breeding lines with highest genetic merits.	BRRI R/S, Rajshahi
21	PYT (DDR-BB) (under TRB Project)	Initial yield evaluation and selection of desirable lines compared to standard checks.	BRRI R/S, Rajshahi
22	OYT#1 (DTR) (under TRB Project)	To understand and select the best performing breeding lines with highest genetic merits.	Paba, Alimgonj, Rajshahi
23	OYT#2 (DTR) (under TRB Project)	To understand and select the best performing breeding lines with highest genetic merits.	Paba, Alimgonj, Rajshahi
24	OYT#3 (DTR) (under TRB Project)	To understand and select the best performing breeding lines with highest genetic merits.	Paba, Alimgonj, Rajshahi
25	OYT (Short duration) (undr AGGRiNet trial)	To understand and select the best performing breeding lines with	BRRI R/S, Rajshahi

		highest genetic merits.	
26	OYT (Medium duration) (undr AGGRiNet trial)	To understand and select the best performing breeding lines with highest genetic merits.	BRRI R/S, Rajshahi
	Boro 2021-22		
27	Hybridization	To develop cold tolerance high yielding genotypes	BRRI R/S, Rajshahi
28	F1 Confirmation	High yield, cold tolerant & acceptable grain type	BRRI R/S, Rajshahi
29	Growing Segregating Population (F2-F6)	To develop drought and cold tolerant rice	BRRI R/S, Rajshahi
30	Germplasm Collection and Evaluation	To characterize and maintain the local germplasm	BRRI R/S, Rajshahi
31	Maintenance Breeding Parents	To use in crossing program.	BRRI R/S, Rajshahi
32	Pure line selection of Zira landraces	To characterize Zira landraces from different region of Rajshahi	BRRI R/S, Rajshahi
33	RYT#1 (FBR_MD)	Evaluation of genotypes for specific and general adaptability in on-station condition.	BRRI R/S, Rajshahi
34	RYT# 2 (FBR_LD)	Evaluation of genotypes for specific and general adaptability in on-station condition.	BRRI R/S, Rajshahi
35	RYT# 3 (FBR_SD)	Evaluation of genotypes for specific and general adaptability in on-station condition.	BRRI R/S, Rajshahi
36	RYT# 4 (CTR#1)	Evaluation of genotypes for specific and general adaptability in on-station condition.	BRRI R/S, Rajshahi
37	RYT# 5 (CTR#2)	Evaluation of genotypes for specific and general adaptability in on-station condition.	BRRI R/S, Rajshahi
38	RYT# 6 (AGGRiNET)	Evaluation of genotypes for specific and general adaptability in on-station condition.	BRRI R/S, Rajshahi
39	RYT# 7 (STR#1)	Evaluation of genotypes for specific and general adaptability in on-station condition.	BRRI R/S, Rajshahi

40	RYT# 8 (STR#2)	Evaluation of genotypes for specific and general adaptability in on-station condition.	BRRI R/S, Rajshahi
41	RYT# 9 (DDR-1_BB)	Evaluation of genotypes for specific and general adaptability in on-station condition.	BRRI R/S, Rajshahi
42	RYT# 10 (DDR-2_BB)	Evaluation of genotypes for specific and general adaptability in on-station condition.	BRRI R/S, Rajshahi
43	RYT# 11 (DDR#3_Blast)	Evaluation of genotypes for specific and general adaptability in on-station condition.	BRRI R/S, Rajshahi
44	RYT#12 (IRR_BPH)	Evaluation of genotypes for specific and general adaptability in on-station condition.	BRRI R/S, Rajshahi
45	RYT#13 (Barishal)	Evaluation of genotypes for specific and general adaptability in on-station condition.	BRRI R/S, Rajshahi
46	RYT#14 (Short Slender)	Evaluation of genotypes for specific and general adaptability in on-station condition.	BRRI R/S, Rajshahi, Naogoan, Paba, Rajarbari
47	RYT#15 (Zira types)	Evaluation of genotypes for specific and general adaptability in on-station condition.	BRRI R/S, Rajshahi, Naogoan, Paba, Rajarbari
48	RYT#16 (Long Slender)	Evaluation of genotypes for specific and general adaptability in on-station condition.	BRRI R/S, Rajshahi, Naogoan, Paba, Rajarbari
49	RYT#17 (PQR)	Evaluation of genotypes for specific and general adaptability in on-station condition.	BRRI R/S, Rajshahi
50	RYT#18 (ZER)	Evaluation of genotypes for specific and general adaptability in on-station condition.	BRRI R/S, Rajshahi
51	AYT	To understand and select the best performing breeding lines with highest genetic merits.	BRRI R/S, Rajshahi
52	OYT (DDR_BB)	To understand and select the best	BRRI R/S, Rajshahi

	(under TRB Project)	performing breeding lines with highest genetic merits	
53	AYT#1 (DDR_BB) (under TRB Project)	To understand and select the best performing breeding lines with highest genetic merits.	BRRI R/S, Rajshahi
54	AYT#2 (DDR_BB) (under TRB Project)	To understand and select the best performing breeding lines with highest genetic merits.	BRRI R/S, Rajshahi
55	AYT#3 (DDR_BB) (under TRB Project)	To understand and select the best performing breeding lines with highest genetic merits.	BRRI R/S, Rajshahi
56	AYT (Favorable) (undr AGGRiNet trial)	To understand and select the best performing breeding lines with highest genetic merits.	BRRI R/S, Rajshahi
57	OYT (Short duration) (undr AGGRiNet trial)	To understand and select the best performing breeding lines with highest genetic merits	BRRI R/S, Rajshahi
58	Evaluation of crop productivity under four crops cropping patterns in farmer's field	To identify the profitable cropping patterns in Rajshahi region.	Alimganj, Paba Rajshahi
59	Evaluation of crop productivity and soil health under conservation tillage system in maize-mungbean-rice cropping pattern	To identify extent of resource conservation under conservation tillage system	BRRI RS Rajshahi
60	Evaluation of crop productivity and soil health under conservation tillage system in maize-mungbean-rice cropping pattern	To identify soil health under intensive cropping patterns	BRRI RS Rajshahi
61	Effect of time of planting with seedling age on Boro rice varieties in Rajshahi Region	To determine optimum plating time of Boro rice in Rajshahi Region	BRRI RS Rajshahi
62	Survey and monitoring of different rice diseases in T. Aman 21, Rajshahi	To investigate the present status of different type of rice diseases in Gazipur	Paba, Godagari, Tanore, Rajshahi
63	Evaluation of effective chemical against Sheath Blight disease of rice, T. Aman 2021	To find out new fungicide(s) against sheath blight disease	BRRI R/S, Rajshahi
64	Efficacy of New Chemicals in	i.To select appropriate chemical(s)	BRRI R/S, Rajshahi

	Controlling Grain Spot, Brown Spot and Narrow Brown Spot of BRRI dhan52	against diseases ii.To reduce minor diseases	
65	Integrated Approaches in reducing Sheath blight diseases in T Aman 2021	i.To minimize chemical use ii.To increase yield	BRRI R/S, Rajshahi
66	Assessment of yield loss due to disease in different BRRI varieties and local varieties in Rajshahi Region	i.To find out yield loss due to disease infestation	Paba, Rajshahi
67	Effect of selected insecticide for stem borer management	ii.To find out effective insecticide for stem borer management	BRRI R/S, Rajshahi

Regional Station, Habiganj			
Sl. No	**Research Title**	**Objectives**	**Location**
1	Growing of F_4 population in Field RGA	To select progenies with emphasis on pigmentation, earliness, plant type, grain type and high yield potential compared to standard varieties.	BRRI Habiganj
2	Hybridization	To development of high yielding anti-oxidant enriched rice with aroma	BRRI Habiganj
3	Regional Yield Trial (Advanced Lines of Deep Water Rice)	To identify advanced lines of deep water rice	BRRI Habiganj
4	Advanced Yield Trial (Deep Water Rice)	To identify advanced lines of deep water rice	BRRI Habiganj
5	Advanced Yield Trial (Deep Water Rice)	To identify advanced lines of deep water rice	BRRI Habiganj
6	Long-term missing element trial for diagnosing the limiting nutrient in soil	In order to find out the yield limiting nutrients, a long term missing element trial	BRRI Habiganj
7	Influence of N & K on performance of modern rice in Habiganj	i.To find out suitable ratio of N & K for modern rice ii.To study N & K dynamics in soil & plant	BRRI Habiganj

8	Comparison of AWD and continuous flooding on GHG emission and GWP but improving rice yield	i.To assess the GHG and net carbon balance ii.To assess the water productivity (WP) iii.To EF and GHGI	BRRI Habiganj and Kushtia
9	Carbon footprint and net carbon balance with organic and inorganic amended rice soil	To assess the carbon footprint and net carbon balance	BRRI Gazipur
10	Effect of time of planting on growth, yield and yield contributing factors of BRRI released varieties in Boro season at Haor region of Bangladesh.	i.To identify the suitable time of planting and variety for Haor area. ii.To recommend appropriate high yielding variety for Haor area.	BRRI Habiganj
11	Screening of Pre-harvest sprouting of some newly released BRRI varieties	To check the pre-harvesting sprouting resistance on newly released BRRI varieties	BRRI Habiganj
12	Screening of some deep water rice for facultative elongation ability.	To find out the facultative elongation ability	BRRI Habiganj and Gazipur
13	Study the elongation variability of some deep water rice at different age affected by flooding time	To study the effect of initial flood on elongation rate	BRRI Habiganj and Gazipur
14	Development of an effective management tactics for rice (*Oryza sativa* L.)	To development an effective pest management approach	BRRI Habiganj
15	Pesticidal effect of different botanicals and chemical against rice weevil (*Sitophilus Oryzae* l.) and anguimous moth *(sitotroga sp.)*	To assess the effectiveness of some botanicals and chemical for the management of Rice Weevil and Anguimous moth.	BRRI Habiganj j
16	Survey and monitoring of rice insect pest	To know the status of insect incidence at farmer's field, their action of controlling insect pest and suggest suitable advice.	BRRI Habiganj
17	Stability Analysis of BRRI released Boro Varieties	To observe the general and specific adaptability and stability of the BRRI released rice varieties	Habiganj

		at BRRI Regional Station, Habiganj.	
18	Demonstration of wet direct seeding crop establishment technique	i.To reduce irrigation and labour cost. ii.To save irrigation water during transplanting. iii.Overcome the labor shortage problems in haor areas during transplanting time.	Habiganj
19	Determination of Optimum Time of Direct Seeding and Thinning for Achieving Higher Yield from Thinner seedling in Haor areas	To determine optimum time of seeding and thinning for escaping flash flood and achieving higher yield from thinner seedling in haor areas	Habiganj
20	Breeders and TLS Seed production	Production of breeder and TLS seed	Habiganj
21	Farmers' training and Field days, Boro, Aus and T. Aman 2020-21	To deliver the knowledge about the modern rice cultivation techniques to farmers.	Habiganj, Sylhet, Moulovibazar and Sunamganj districts

Regional Station, Sonagazi			
Sl. No	**Research Title**	**Objectives**	**Location**
	Season: Aus 2021		
1	Stability Analysis of BRRI developed rice varieties in Aus 2021	i.To investigate the stability of BRRI developed Aus rice varieties ii.To find out location specific suitable variety(s)	Research farm of BRRI Sonagazi
2	Regional Yield Trial (RYT-1) in Aus 2021	To evaluate specific and general adaptability of the advance breeding lines as compared with standard checks in on-station.	BRRI RS Sonagazi, Feni
3	Regional Yield Trial -2 in Aus 2021	To evaluate specific and general adaptability of the advance breeding lines as compared with standard checks in on-station.	BRRI, Sonagazi, Feni

4	Seed production and Dissemination Program (SPDP) Aus 2021	i.Rapid dissemination of newly released rice varieties to the farmers ii.Motivate farmers to produce and preserve good quality seeds iii.Increase availability of quality seed of modern rice varieties at farm level iv.Exchange seeds from farmers to farmers v.Collect feedback about the varieties from farmers and Extension personnel.	Twenty Upazila of eight districts (Feni, Noakhali, Laxmipur, Chattogram, Khagrachari, Rangamati, Bandarban and Cox's Bazar)
5	Demonstration of BRRI hybrid dhan7	i.Rapid dissemination of BRRI hybrid dhan7 to the farmers ii.To increase food security producing more rice.	Chattogram and Rangamati regions
	Season: Aman 2021		
6	Stability Analysis of BRRI Developed Rice Varieties in T. Aman 2021	i.To investigate the stability of BRRI developed Aman rice varieties. ii.To find out location specific suitable variety(s)	Research farm of BRRI Sonagazi
7	Regional Yield Trial (RYT-1) STR in T. Aman 2021	To evaluate specific and general adaptability of the advance salinity tolerant breeding lines as compared with standard checks in on-station.	BRRI Sonagazi farm
8	Regional Yield Trial (RYT-2) STR in T. Aman 2021	To evaluate specific and general adaptability of the advance salinity tolerant breeding lines as compared with standard checks in on-station.	BRRI Sonagazi farm
9	Regional Yield Trial (RYT) RLR in T. Aman 2021		
10	Regional Yield Trial (RYT) ZER in T. Aman 2021	To evaluate specific and general adaptability of the advance salinity tolerant breeding lines as	BRRI Sonagazi farm

		compared with standard checks in on-station.	
11	Advanced Lines Adaptive Research Trial (SubTR-SD) in T. Aman 2021	i.To evaluate the yield potential and adaptability of the rice genotypes at farmers' field as submergence tolerance short duration during T. Aman season. ii.To get feedback information about the advantages and disadvantages of the selected materials from farmers and Extension personnel. iii.To select suitable material(s) for proposed variety trial (PVT).	Sonagazi, Feni Mirsarai, Chattogram
12	Advanced Lines Adaptive Research Trial (SubTR-LD) in T. Aman 2021	i.To evaluate the yield potential and adaptability of the rice genotypes at farmers' field as submergence tolerance short duration during T. Aman season. ii.To get feedback information about the advantages and disadvantages of the selected materials from farmers and Extension personnel. iii.To select suitable material(s) for proposed variety trial (PVT).	Rangunia and Mirsarai, Chattogram
13	Advanced Lines Adaptive Research Trial (PQR) in T. Aman 2021	i.To evaluate the yield potential and adaptability of the rice genotypes at farmers' field as submergence tolerance short duration during T. Aman season. ii.To get feedback information about the advantages and disadvantages of the selected materials from farmers and Extension personnel. iii.To select suitable material(s) for proposed variety trial (PVT).	Hajirmur, Charchandia, Sonagazi
14	Truthfully labeled Seed (TLS) Production in Boro 2021-22 and Aman 2021	i. Utilize quality seed for conducting Research (HHAT) and Demonstration (SPDP) ii. Provide seeds to different stakeholders to enhance dissemination of modern rice	BRRI Sonagazi farm

		varieties.	
15	Head to Head Adaptive Trial (LD, SD, CE & FFS) under TRB, Aman 2021	i. Validate the adaptability of modern rice varieties in different environments at farmers' field. ii. Investigate the performance of promising varieties compared to popular mega variety. iii. Select suitable variety(s) for target environments.	Feni, Chattogram, Cox'sbazar, Bandarban
16	Head to Head Adaptive Trial (LD, SD & CE) under TRB, Aman 2021	i.Validate the adaptability of modern rice varieties in different environments at farmers' field. ii.Investigate the performance of promising varieties compared to popular mega variety. iii.Select suitable variety(s) for target environments.	Feni, Noakhali, Laxmipur, Cox'sbazar
17	Seed Production and Dissemination Program (SPDP) during T. Aman2021, under GOB	i.Validate the adaptability of modern rice varieties in different environments at farmers' field. ii.Investigate the performance of promising varieties compared to popular mega variety. iii.Select suitable variety(s) for target environments.	Forty five Upazila of eight districts (Feni, Noakhali, Laxipur, Chattogram, Khagrachari, Rangamati, Bandarban and Cox's Bazar)
18	Breeder seed production of BRRI dhan34, 49, 82 & 87 in T. Aman 2021	To guarantee that the subsequent generation seed class (foundation seed) shall conform to the prescribed standards of genetic purity	BRRI, Sonagazi, Feni
19	Truthfully Labeled Seed (TLS) Production (Variety: BRRI dhan34, 48, 49, 52, 70, 71, 73, 75, 76, 78, 79, 80, 82, 83, 85, 87, 90, 93, 94, 95, 97, 98, 99, 100) in T. Aman 2021	i.Utilize quality seed for conducting Research (HHAT) and Demonstration (SPDP) ii.Provide seeds to different stakeholders to enhance dissemination of modern rice varieties.	BRRI, Sonagazi, Feni
	Season: Boro 2021-2022		
20	RYT Zinc Enriched Rice(ZER)	i.Utilize quality seed for	BRRI, Sonagazi,

	in Boro 2021-22	conducting Research (HHAT) and Demonstration (SPDP) ii.Provide seeds to different stakeholders to enhance dissemination of modern rice varieties.	Feni
21	RYT Favorable Boro Rice Medium Duration (FBR-MD) in Boro 2021-22	i.Utilize quality seed for conducting Research (HHAT) and Demonstration (SPDP) ii.Provide seeds to different stakeholders to enhance dissemination of modern rice varieties.	BRRI, Sonagazi, Feni
22	RYT Favorable Boro Rice Biotechnology	i.Utilize quality seed for conducting Research (HHAT) and Demonstration (SPDP) ii.Provide seeds to different stakeholders to enhance dissemination of modern rice varieties.	BRRI, Sonagazi, Feni
23	Effect of micronutrient Zinc in Boro 2021-22	To investigate the effect of Zinc on Boro rice varieties.	BRRI, Sonagazi, Feni
24	Screening of Insect pest and Diseases	i.To investigate pest and disease incidence and tolerance of the modern rice varieties ii.To select resistant rice varieties against major rice insect pest and disease	BRRI, Sonagazi, Feni
25	Yield maximization in Boro 2021-22	To maximize the yield of rice through integrated use of manures and fertilizers	BRRI, Sonagazi, Feni
26	Evaluation of NPK Combo in Boro 2021-22	To see the effect of NPK combo fertilizer on yield of rice production	BRRI, Sonagazi, Feni
27	Evaluation of Flora Boro 2021	To see the effect of Flora on better growth of rice plant	On-station
	MLT Plant Pathology Boro 2021-22	To Evaluate specific and general adaptability of disease resistant advance lines	On-station and on-farm

28	Screening of modern rice against Stem Borer & Leaf Folder	To evaluate pest incidence and tolerance on modern rice varieties	On-station
29	OYT Plant Pathology Boro 2021-22	To evaluate disease tolerance and yield potential of advance breeding lines	On-station
30	Effect of Nitrogen on Modern varieties of Boro rice 2021-22	i) To evaluate the responses of Bangabandhu dhan100 under a range of nitrogen supplies ii) To find out optimum nitrogen requirement for maximum yield of Bangabandhu dhan100.	BRRI, Sonagazi, Feni
31	Advanced Lines Adaptive Research Trial (STR-1) in Boro 2021-22	i. To evaluate the yield potential and adaptability of the advanced rice genotypes at farmer's field as salinity tolerance Boro rice in the real salinity prone area. To get feedback information about the advantages and disadvantages of the selected materials from farmers and Extension personnel. ii. To select suitable material(s) for proposed variety trial (PVT).	Sonagazi
32	Advanced Lines Adaptive Research Trial (STR-2) in Boro 2021-22	i.To evaluate the yield potential and adaptability of the advanced rice genotypes at farmer's field as salinity tolerance Boro rice in the real salinity prone area. To get feedback information about the advantages and disadvantages of the selected materials from farmers and Extension personnel. ii.To select suitable material(s) for proposed variety trial (PVT).	Sonagazi
33	Advanced Lines Adaptive Research Trial (STR-1) in Boro 2021-22	i.To evaluate the yield potential and adaptability of the advanced rice genotypes at farmer's field as salinity tolerance Boro rice in the real salinity prone area. To get feedback information about the advantages and disadvantages of the selected materials from	Companiganj

		farmers and Extension personnel. ii.To select suitable material(s) for proposed variety trial (PVT).	
34	Advanced Lines Adaptive Research Trial (STR-2) in Boro 2021-22	i. To evaluate the yield potential and adaptability of the advanced rice genotypes at farmer's field as salinity tolerance Boro rice in the real salinity prone area. To get feedback information about the advantages and disadvantages of the selected materials from farmers and Extension personnel. ii.To select suitable material(s) for proposed variety trial (PVT).	Companiganj
35	Advanced Lines Adaptive Research Trial (Superior High Yielding Rice- SHR) in Boro 2021-22	i. To evaluate the yield potential and adaptability of the advanced rice genotypes at farmer's field as salinity tolerance Boro rice in the real salinity prone area. To get feedback information about the advantages and disadvantages of the selected materials from farmers and Extension personnel. ii.To select suitable material(s) for proposed variety trial (PVT).	Sonagazi
36	Advanced Lines Adaptive Research Trial (FBR Barishal) in Boro 2021-22	i. To evaluate the yield potential and adaptability of the advanced rice genotypes at farmer's field as salinity tolerance Boro rice in the real salinity prone area. To get feedback information about the advantages and disadvantages of the selected materials from farmers and Extension personnel. ii.To select suitable material(s) for proposed variety trial (PVT).	Sonagazi
37	Advanced Lines Adaptive Research Trial (PQR) in Boro 2021-22	i. To evaluate the yield potential and adaptability of the advanced rice genotypes at farmer's field as salinity tolerance Boro rice in the real salinity prone area. To get feedback information about the advantages and disadvantages of	Sonagazi

		the selected materials from farmers and Extension personnel. ii.To select suitable material(s) for proposed variety trial (PVT).	
38	Optimizing Planting Geometry of BD100 in Boro2021-22	i.To investigate the responses of Bangabandhu dhan100 to varying plant spacings ii.To determine the optimum spacing for better performance of Bangabandhu dhan100	On- station
39	Effect of micronutrient Zinc on the performance of modern rice varieties in Boro2021-22	To investigate the effect of Zinc on the performance of the rice varieties.	BRRI, Sonagazi, Feni
40	Stability Analysis of BRRI Developed Rice Varieties in Boro 2021-22	i.To investigate the stability of BRRI developed Boro rice varieties ii.To find out location specific suitable variety(s)	Research farm of BRRI Sonagazi
41	Survey and monitoring of rice diseases in Boro2021-22	To monitor the disease prevalence at Chattogram and Rangamati region.	Farmers' fields of Chattogram and Rangamati regions
42	F_1 Seed Production of BRRI hybrid dhan5 in Boro 2021-22	To produce F1 hybrid seed of BRRI hybrid dhan5	BRRI, Sonagazi, Feni
43	Breeder Seed Production	To guarantee that the subsequent generation seed class (foundation seed) shall conform to the prescribed standards of genetic purity	BRRI, Sonagazi, Feni
44	Seed Production and Dissemination Program (SPDP) during Boro2021-22, under GOB	i. Rapid dissemination of newly released rice varieties to the farmers ii. Motivate farmers to produce and preserve good quality seeds iii. Increase availability of quality seed of modern rice varieties at farm level iv. Exchange seeds from farmers to farmers v. Collect feedback about the varieties from farmers and Extension personnel.	38 Upazila of 8 districts (Feni, Noakhali, Laxipur, Chattogram, Khagrachari, Rangamati, Bandarban and Cox's Bazar)
45	Seed Production and Dissemination Program (SPDP)	i. Rapid dissemination of newly released rice varieties to the	Twenty Upazila of eight districts (Feni,

	during Boro2021-22, under TRB	farmers. ii.Motivate farmers to produce and preserve good quality seeds iii.Increase availability of quality seed of modern rice varieties at farm level iv.Exchange seeds from farmers to farmers v.Collect feedback about the varieties from farmers and Extension personnel.	Noakhali,Laxipur, Chattogram, Khagrachari, Rangamati, Bandarban and Cox's Bazar)
46	Seed Production and Dissemination Program (SPDP) during Boro2021-22, under HHAT	i.Rapid dissemination of newly released rice varieties to the farmers ii.Motivate farmers to produce and preserve good quality seeds iii.Increase availability of quality seed of modern rice varieties at farm level iv.Exchange seeds from farmers to farmers v.Collect feedback about the varieties from farmers and Extension personnel.	Twenty Upazila of eight districts (Feni, Noakhali,Laxipur, Chattogram, Khagrachari, Rangamati, Bandarban and Cox's Bazar)
47	Farmers Training on Rice Technologies 2021-22	i.To update knowledge and skills of farmers and extension personnel on modern rice production technologies. ii.To enhance dissemination of new technologies among the farmers.	Noakhali, Feni, Chattogram, Cox'sbazar and Khagrachari districts
48	Field Day 2021-22	Awareness building and create interest among the farmers and concerned extension agents about the modern rice production technologies.	Eight districts of Chattogram and Rangamati regions

Regional Station, Satkhira			
Sl. No	**Research Title**	**Objectives**	**Location**
1	Hybridization	To develop breeding lines with high yield potential along with desirable growth duration, acceptable grain quality and resistance to insect pests and salt tolerance	On-farm
2	Morphological and molecular characterization of newly collected rice germplasm	To characterize newly collected rice germplasm using morphological traits	On-farm
3	Regional Yield Trial (RYT)	To evaluate specific and general adaptability of the advance breeding lines with respective check-in on-station condition	On-station
4	Multi-location Trial of blast resistance breeding lines (MLT-Blast)	To evaluate blast resistance breeding lines at different location.	On-farm
5	Confined Field Trial (CFT) for High Zinc and Iron (CFT-HIZR)	To evaluate phenotypic characteristics and agronomic performance under field conditions of advanced breeding lines containing high iron and zinc rice events (IRS1030-031, IRS1030-039 and IRS1027-059)	On-station
6	Advanced Line Adaptive Research Trial (ALART)	i.To evaluate the yield potential and adaptability of the advanced rice genotypes at farmers' field ii.To get feedback information about the advantages and disadvantages of the selected materials from farmers and Extension personnel iii.To select suitable material(s) for Proposed Variety Trial (PVT)	On-farm
7	Selection of suitable hybrid rice	To find out hybrid rice genotypes	On-farm

	genotypes at farmers field under saline prone areas for Boro season	suitable for saline prone areas for Boro Season	
8	Line Stage Trial (LST)	To assess FRGA/RGA derived advanced breeding lines for uniformity at heading and desirable agronomic and grain type traits	On-farm, On-station
9	Observational Yield Trial (OYT)	Identification of genetically fixed advanced lines suitable for saline areas	On-farm, On-station
10	Preliminary Yield Trial (PYT)	Initial evaluation of breeding lines for yield and other agronomic characteristics in replicated trial	On-farm, On-station
11	Advanced Yield Trial (AYT)	Confirmatory evaluation of selected genotypes for yield and other agronomic characteristics	On-farm, On-station
12	Regional Yield Trial (RYT)	To evaluate specific and general adaptability of the advance breeding lines with respective check-in on-station condition	On-farm, On-station
13	International Rice Soil Stress Tolerant Nursery (IRSSTN)		On-farm, On-station
14	Asian Food and Agriculture Cooperation Initiative (AFACI) program	Initial evaluation of yield, salt tolerance and other agronomic characteristics of selected materials in replicated trial.	On-farm, On-station
15	AGGRi Network trial	To select the superior breeding lines in salinity stress environment of Bangladesh	On-farm
16	Effects of long-term missing nutrients on rice yield	To identify yield limiting nutrients of rice	On-station
17	Effect of zinc fertilization on zinc enriched rice in saline soil	To study the effect of Zn fertilization on Zn accumulation and uptake by Zn enriched rice varieties in saline soil	On-station
18	Effects of fertilizer and varietal		On-station

	management on greenhouse gas emissions in the South-Western costal ecosystem		
19	Effects of bio-organic fertilizer on rice yield in Boro season in the south-western costal ecosystem	i.To evaluate the impact of bio-organic fertilizer on rice yield. ii.To determine the effect of bio-organic fertilizer on saline soil properties	On-station
20	Judicial N management in Boro rice for increasing yield		On-station
21	Cost-effective hybrid rice production by optimizing seedling age and number	i.To find out the appropriate seedling age and number for transplanting of hybrid rice for optimum yield ii.Adjustment of seed rate for hybrid rice production from seed germination	On-farm
22	Development of four-cropped cropping pattern under irrigated ecosystem	i.To increase the total productivity of unit area per year by increasing cropping intensity ii.To compare the sustainability of four cropped cropping patterns in terms of soil health and economic profit	On-farm
23	Integration of mustard in the rice growing environments	To improve system productivity by introducing mustard in the existing rice-based cropping pattern	On-farm
24	Introducing B. Aus rice in the Watermelon-Fallow-T. Aman pattern	To find out the scope of utilizing fallow land after watermelon cultivation by cultivating B. Aus rice under rainfed condition	On-farm
25	Stability Analysis of BRRI Varieties at Satkhira	To find out the suitability and adaptability of the particular variety	On-station
26	Estimation of rice yield in different seasons of Bangladesh:	i.To find out the on-farm yield of BRRI released rice varieties in	On-farm

	Crop cuts method	Satkhira and Jashore regions ii.To analyze the performance of BRRI released rice varieties with other varieties	
27	Raising Boro seedling for energy-efficient land use	i.Identification of healthy seedling raising technique of rice during cool temperature ii.Reduction of field duration of Boro rice cultivation by early transplanting	On-station
28	Monitoring Soil-Water Salinity of BRRI Farm, Satkhira	To know the salinity status of BRRI-RS, Satkhira	On-station
29	Monitoring Weather Status of BRRI Farm, Satkhira	To know the weather status of BRRI-RS, Satkhira	On-station
30	Head-to-head adaptive trial (HHAT) of Modern Rice Varieties	i.To find out the adaptability of BRRI released rice varieties in various regions of Bangladesh ii.To compare modern rice varieties with popular local varieties ii.Selection of rice variety/varieties suitable for a particular region iv.To analyze farmers' response to modern rice varieties and take necessary actions accordingly	On-farm
31	Seed production and dissemination program (SPDP)	To disseminate BRRI varieties rapidly among the farmers of Khulna and Satkhira region	On-farm
32	Production program of BRRI released rice varieties in the southern coastal gher-ecosystem of Bangladesh	To find out the yield performance of BRRI released saline tolerant rice varieties in gher system	On-farm

Regional Station, Rangpur			
Sl. No	**Research Title**	**Objectives**	**Location**
1.	Development of rice varieties suitable for Rangpur region	High yielding (>=08 t/ha) rice varieties will be developed with tolerance to drought, resistance to major biotic stresses (insect and diseases) and acceptable grain quality	BRRI RS Rangpur
2.	Breeding for Second Generation Rice (SGR)	Super high yielding (≥8 t/ha for T. Aman and ≥10 t/ha for Boro) rice varieties will be developed with improved modified plant type giving the thrust is to develop short duration varieties accompanied with tolerance to biotic and abiotic stresses and acceptable grain quality	BRRI RS Rangpur
3.	Breeding for Antioxidant Rice (Black/ Red/Purple)	To develop high yielding (≥6 t/ha for T. Aman and ≥8 t/ha for Boro) rice varieties with improved plant type and acceptable grain quality	BRRI RS Rangpur
4.	Breeding for Photoperiod-sensitive rice varieties (PSR) for lowland and Charland ecosystem	To develop photoperiod-sensitive high yielding climate smart rice varieties with yield potential (≥7 t/ha)	BRRI RS Rangpur
5.	Development of Medium stagnation and submergence Tolerant Rice (MSSTR)	To develop multiple stress tolerant rice varieties like stagnant flood and flash flood submergence with high yield potential (≥8 t/ha) under stress condition	BRRI RS Rangpur
6.	Development of disease resistant hybrid rice against multi-resistant (BB, BLAST and TUNGRO)	i. To identification of maintainers and restorers against multi-resistant. ii. To make a test cross for identification of heterotic hybrid rice combinations with multi-resistant.	BRRI RS Rangpur

7	Regional Yield Maximization Trial (RYMT) under recommended management practices	Suitable genotypes with higher yield potential will be identified	BRRI RS Rangpur
8	Protection of Boro Rice Seedling from Cold Injury using Polythene Shed	The most suitable technique for protecting Boro rice seedling from cold injury will be developed.	BRRI RS Rangpur
9	Influence of Dates of Transplanting and seedling age on the Yields of Rice	The optimum seedling age and best planting time of BRRI developed latest rice varieties for higher yield levels will be identified	BRRI RS Rangpur
10	Determining Minimum Irrigation Water Requirement of Rice at Different Regions of Bangladesh through Water Balance from On-Farm and Model Simulation	The water requirement and yield response of rice to irrigation application will be measured.	BRRI RS Rangpur
11	Long term missing element trial at BRRI regional station Rangpur (Long-term)	Yield limiting nutrient will be identified.	BRRI RS Rangpur

BRRI Regional Station, Bhanga			
Sl. No	**Research Title**	**Objectives**	**Location**
1	Breeding for developing high yielding Transplanting Aman rice varieties (Hybridization)	To develop breeding population with desirable characters with emphasis on water stagnation tolerance, anaerobic tillering, earliness and good grain quality	BRRI Regional Station Bhanga, Faridpur
2	Breeding for developing high yielding shallow flooded Deep water rice varieties (Hybridization)	To develop breeding population with desirable characters of deep water Aman rice	BRRI R/S Bhanga, Faridpur
3	Breeding for developing high yielding Aus rice varieties (Hybridization)	To develop breeding population with introgression of heat tolerance, short duration and good grain properties	BRRI R/S Bhanga, Faridpur
4	Confirmation of F_1s	To confirm the crosses as true hybrid	BRRI R/S Bhanga, Faridpur

5	FRGA	Quick generation Advance	BRRI R/S Bhanga, Faridpur
6	Preliminary yield trial of deep-water rice germplasm	To evaluate the yield performance of five deep water rice germplasm for comparing with standard check	BRRI R/S Bhanga, Faridpur
7	RYT: DWR	To evaluate specific and general adaptability of the genotypes at BRRI R/S Bhanga, Faridpur	BRRI R/S Bhanga, Faridpur
8	Development of Anoxia Tolerant Rice	To develop high yielding anoxia and water stagnation tolerant rice varieties for direct seeding condition to fit on T. Aman pattern (onion/wheat-Jute-Relay)	BRRI R/S Bhanga, Faridpur
9	Collection of local rice landraces	To collect local rice landraces for breeding purpose and conserve in the Genebank of BRRI	BRRI R/S Bhanga, Faridpur
10	Characterization of local rice landraces from Faridpur region	To maintain seed and characterize rice landraces as per 'Germplasm Descriptors and Evaluation Form' of GRSD, BRRI.	BRRI R/S Bhanga, Faridpur
11	Identification of anaerobic germination (AG) tolerance of selected rice germplasm of Bangladesh	To identify local donor for anaerobic germination tolerance in selected rice germplasm of Bangladesh.	BRRI R/S Bhanga, Faridpur
12	Head to Head Trial: VRS (Variety-Replacement Strategy)	i. To evaluate the adaptation of BRRI released rice varieties in different region of the country. ii. To compare the modern rice variety with local variety. iii. To select appropriate variety for specific region. iv. To disseminate the modern varieties throughout the country.	Different upazilas of Faridpur Region
13	Demonstration trial of BRRI developed HYVs and Hybrids	To disseminate the modern HYVs and Hybrids varieties in Faridpur region	Different upazilas of Faridpur Region

	varieties		
14	Effects of planting time on *Aus* rice in char land area of Faridpur region	i. To achieve sustainable rice production at char land environment. ii. To adjust planting time for saving/protect *Aus* crop from early flood.	Char land area of Faridpur region
15	Development of weed control techniques in Boro-Fallow-Fallow cropping pattern	To develop cost-effective weed control practices for sustainable weed management in Boro-Fallow-Fallow cropping systems	BRRI R/S Bhanga, Faridpur
16	Introduction of intercropping system in different cropping pattern for medium high land area in Faridpur region (On-going)	To increase cropping intensity and productivity in Faridpur region	Different upazilas of Faridpur Region
17	Rice farming components could be an option for biological weed control at transplanted *Boro* rice field in Faridpur region	i. To reduce the weed infestation along with cost of labour ii. To find out the effective way for controlling the aquatic weed in irrigated wetland rice field iii. To increase the productivity and reduce the cost of production of rice in Faridpur region	Different upazilas of Faridpur Region
18	Mulching technique of zero tillage garlic production in Garlic-Jute-Fallow cropping pattern at Faridpur region	i. To reduce the weed infestation along with requirement of irrigation ii. To increase the yield of garlic at Faridpur region	Different upazilas of Faridpur Region
19	A survey on crops and cropping of char areas in Faridpur region	i. To delineate socio economic profiles of the farmers, their land utilization pattern, existing cropping patterns, crops and crop production practices. ii. To know about soil properties and organic matter content.	Different upazilas of Faridpur Region

Regional Station, Kushtia			
Sl. No	**Research Title**	**Objectives**	**Location**
	Season: T. Aman 2021		
1	ALART for Zinc Enriched Rice (ZER) (Including 1 entries against 3 standard checks)	To evaluate the yield potential and adaptability of the advanced lines at farmers' field in different agro-ecological zones.	Jugia Pal Para Kushtia Sadar, Kushtia
2	Regional Yield Trial Saline tolerant Rice (STR-1) (Including 8 entries against 2 standard checks)	Evaluation of agronomic performance, specific and general adaptability under on station condition	BRRI Regional Station, Kushtia
3	Regional Yield Trial Saline Tolerant Rice (STR-2) (Including 8 entries against 2 standard checks)	Evaluation of agronomic performance, specific and general adaptability under on station condition	BRRI Regional Station, Kushtia
4	Multi Location Trial (MLT-1) (Including 3 entries against 3 standard checks)	Evaluation of agronomic performance, specific and general adaptability under on station condition	BRRI Regional Station, Kushtia
5	Multi Location Trial (MLT-2) (Including 3 entries against 3 standard checks)	Evaluation of agronomic performance, specific and general adaptability under on station condition	BRRI Regional Station, Kushtia
6	Regional Yield Trial Extra Long Slender (ELS-1) (Including 3 entries against 2 standard checks)	Evaluation of agronomic performance, specific and general adaptability under on station condition	BRRI Regional Station, Kushtia
7	Regional Yield Trial Extra Long Slender (ELS-2) (Including 3 entries against 2 standard checks)	Evaluation of agronomic performance, specific and general adaptability under on station condition	BRRI Regional Station, Kushtia
8	Regional Yield Trial Long Slender (LS-1) (Including 5 entries against 2 standard checks)	Evaluation of agronomic performance, specific and general adaptability under on station condition	BRRI Regional Station, Kushtia
9	Regional Yield Trial Long Slender (LS-2) (Including 5 entries against 2 standard	Evaluation of agronomic performance, specific and general adaptability under on station	BRRI Regional Station, Kushtia

	checks)	condition	
10	Regional Yield Trial Short Slender (SS-1) (Including 4 entries against 3 standard checks)	Evaluation of agronomic performance, specific and general adaptability under on station condition	BRRI Regional Station, Kushtia
11	Short Slender (SS-2) (Including 4 entries against 3 standard checks)	Evaluation of agronomic performance, specific and general adaptability under on station condition	BRRI Regional Station, Kushtia
	Season: Boro 2021-22		
12	Identification and screening of prospective aerobic rice from local and BRRI developed rice varieties, Boro, 2020-21 (Including 10 entries against 3 standard checks)	Evaluation of agronomic performance, specific and general adaptability under on station condition	BRRI Regional Station, Kushtia
13	Regional Yield Trial Disease Resistant Rice for Blast (DRR-Blast) (Including 7 entries against 2 standard checks)	Evaluation of agronomic performance, specific and general adaptability under on station condition	BRRI Regional Station, Kushtia
14	Regional Yield Trial Disease Resistant Rice (DRR-BB-1) (Including 12 entries against 2 standard checks)	Evaluation of agronomic performance, specific and general adaptability under on station condition	BRRI Regional Station, Kushtia
15	Regional Yield Trial Disease Resistant Rice (DRR-BB-2) (Including 12 entries against 3 standard checks)	Evaluation of agronomic performance, specific and general adaptability under on station condition	BRRI Regional Station, Kushtia
16	Regional Yield Trial Premium Quality Rice (PQR) (Including 2 entries against 3 standard checks)	Evaluation of agronomic performance, specific and general adaptability under on station condition	BRRI Regional Station, Kushtia
17	Regional Yield Trial Long Slender (LS) (Including 3 entries against 1 standard checks)	Evaluation of agronomic performance, specific and general adaptability under on station condition	BRRI Regional Station, Kushtia
19	Regional Yield Trial Insect Resistant Rice (IRR-BPH) (Including 7 entries against 3	Evaluation of agronomic performance, specific and general adaptability under on station	BRRI Regional Station, Kushtia

	standard checks)	condition	
20	Regional Yield Trial Favorable Boro Rice (FBR-MD) (Including 13 entries against 2 standard checks)	Evaluation of agronomic performance, specific and general adaptability under on station condition	BRRI Regional Station, Kushtia
21	Regional Yield Trial Favorable Boro Rice (FBR-LD) (Including 9 entries against 2 standard checks)	Evaluation of agronomic performance, specific and general adaptability under on station condition	BRRI Regional Station, Kushtia
22	Regional Yield Trial Favorable Boro Rice (FBR-SD) (Including 4 entries against 2 standard checks)	Evaluation of agronomic performance, specific and general adaptability under on station condition	BRRI Regional Station, Kushtia
23	Regional Yield Trial AGGRiNET (Including 7 entries against 4 standard checks)	Evaluation of agronomic performance, specific and general adaptability under on station condition	BRRI Regional Station, Kushtia
24	ALART for Premium Quality Rice (PQR) (Including 2 entries against 3 standard checks)	To evaluate the yield potential and adaptability of the advanced lines at farmers' field in different agro-ecological zones.	Baradi Kushtia Sadar, Kushtia
25	ALART for Faavorable Boro Rice (FBR-Barishal) (Including 4 entries against 2 standard checks)	To evaluate the yield potential and adaptability of the advanced lines at farmers' field in different agro-ecological zones.	Baradi Kushtia Sadar, Kushtia
26	ALART for Blast Resistant Rice (Including 4 entries against 2 standard checks)	To evaluate the yield potential and adaptability of the advanced lines at farmers' field in different agro-ecological zones.	Baradi Kushtia Sadar, Kushtia
27	ALART for Superior High Yielding Rice (SHR) (Including 3 entries against 2 standard checks)	To evaluate the yield potential and adaptability of the advanced lines at farmers' field in different agro-ecological zones.	Baradi Kushtia Sadar, Kushtia
28	Demonstrations of newly released BRRI varieties for Aus, T.Aman and Boro seasons	To disseminate and popularize the varieties among the farmers in Kushtia	On farm, Kushtia Region
29	Stability analysis of BRRI varieties, T. Aus, 2021 (Including 13 varieties)	To maintain season, year and location-wise data base on the yield performance of BRRI varieties.	BRRI Regional Station, Kushtia

30	Stability analysis of BRRI varieties, T. Aman, 2021 (Including 47 varieties)	To maintain season, year and location-wise data base on the yield performance of BRRI varieties.	BRRI Regional Station, Kushtia
31	Stability analysis of BRRI varieties, Boro, 2021-22 (Including 47 varieties)	To maintain season, year and location-wise data base on the yield performance of BRRI varieties.	BRRI Regional Station, Kushtia
32	Determining minimum irrigation water requirement of rice in different regions through water balance from on-farm demand and model simulation	i) To measure minimum rice irrigation water requirement for different regions ii)To measure rice yield response to on-farm demand based and simulated irrigation application iii)To figure out the variation in irrigation water requirement quantification among the treatments	BRRI Regional Station, Kushtia
33	Yield and water productivity affected by transplanting time and water management in Kushtia region	i)To determine the effect of transplanting date on grain yield ii)To determine the yield response to water management on BRRI dhan96 iii)To find out the combine effect of transplanting date and irrigation management on the cultivar	BRRI Regional Station, Kushtia
34	Evaluation of drought tolerance ability of newly released BRRI variety (Aman) in drought prone area	i)To evaluate drought response under different water stress conditions ii)To figure out the effect of supplemental irrigation on yield and yield contributing parameters iii)To identify the suitability of newly released BRRI variety in drought prone area	BRRI Regional Station, Kushtia
35	Determination of optimum time of planting and seedling age for	To find out optimum time of planting and seedling age for	BRRI Regional Station,

	yield maximization of BRRI dhan87 at Kushtia region	BRRI dhan87	Kushtia
36	Improvement of Mustard- T. Aus - T. Aman cropping pattern with variety replacement for sustainable productivity in Kushtia region	i) To identify the best vareity in Mustard - T. Aus – T. Aman cropping pattern ii) To introduce new BRRI vareities in the pattern iii) To maintain a sustainable productivity of the mentioned pattern	BRRI Regional Station, Kushtia
37	Yield response of rice to different rates of Nitrogen and Potash fertilizer in Boro-Fallow-T. Aman cropping pattern in Kushtia (continue).	To find out the best dose combination of Urea and MoP	BRRI Regional Station, Kushtia
38	Increasing the system productivity of the dominant cropping pattern in Kushtia region (Boro-Fallow-T. Aman) (New)	i) To increase the whole systems productivity through inclusion of modern varieties and advanced agronomic management practices ii) To increase farmer's income through adding high value oil seed crops (mustard) in the existing pattern	On farm, Kushtia Region

Regional Station, Sirajgonj			
Sl. No	**Research Title**	**Objectives**	**Location**
1.	Response of latest BRRI varieties in Char land areas of Sirajganj.	Response of latest BRRI varieties in Char land areas of Sirajganj.	BRRI Regional Station, Sirajganj
2.	Effect of transplanting date and spacing on the yield of different short duration rice varieties.	To find out the suitable transplanting date of different short duration rice variety in terms of maximum benefit.	BRRI Regional Station, Sirajganj
3.	Survey of existing char land cropping pattern in Sirajganj./	i.To identify the existing cropping pattern of char land in Sirajganj.	Kazipur & Sirajganj

	Characterization of cropping system in charland	and ii. To improve/modify the present cropping pattern for rice cultivation.	
4.	Monitoring of fall armyworm moth using pheromone trap	To record the present status of Fall armyworm, *S. frugiperda* in rice based ecosystem.	Tarash, Sirajganj, and Sherpur, Bogura
5.	Effects of soil amendment practices on grain yield and yield components of modern variety at BRRI farm, Sirajganj.	To improved soil physical properties that will improve soil water retention capacity of the root zoon.	BRRI Regional Station, Sirajganj
6.	Integrated Nutrient Management on Growth and Yield of Boro Rice in Charland.	To identify proper nutrient management practice through organic and inorganic amendments in Charland area.	BRRI Regional Station, Sirajganj
7.	Effect of biochar on rice yield and soil health on problem soils	To study the effect of biochar on rice yield, nutrient use efficiency and soil health of charland soils	BRRI Regional Station, Sirajganj
8.	Light trap collection of rice insect pests and natural enemies	To study the pest and their natural enemy incidence patterns in rice fields and to create a database to develop a forecasting system	BRRI Regional Station, Sirajganj
9.	Use of Sex pheromone to control stem borer	To study the efficacy of sex pheromone To control rice stem borer in rice field	BRRI Regional Station, Sirajganj

Regional Station, Gopalgonj			
Sl. No	**Research Title**	**Objectives**	**Location**
1.	Collection of local rice landraces	To collect local rice landraces for breeding purpose and conserve in the Genebank of BRRI	Gopalganj, Bagerhat and Narail
2.	Characterization of local rice landraces from Gopalganj region	To maintain seed and characterize rice landraces as per 'Germplasm Descriptors and Evaluation Form' of GRSD, BRRI.	BRRI RS Gopalganj

3.	Preliminary yield trial of deep-water rice germplasm	To evaluate the yield performance of five deep water rice germplasm for comparing with standard check	BRRI RS Gopalganj
4.	Secondary yield trial of Jhum rice genotypes	To evaluate the yield performance of two *Jhum* rice genotypes for comparing with standard check	BRRI RS Gopalganj
5.	Effects of N Rates on the Yield of BRRI dhan87	To update the N rates of BRRI dhan87 in BRRI Farm Gopalganj	BRRI RS Gopalganj
6.	Breeder seed production	To produce breeder seed of BRRI developed rice varieties	
7.	Hybrid seed production (BRRI hybrid dhan5)	To produce F1 seed of BRRI hybrid dhan5	BRRI RS Gopalganj
8.	Truthfully Label Seed (TLS) Production	To produce TLS seed of BRRI developed rice varieties as per indent of local demand	BRRI RS Gopalganj
9.	Head to Head Trial: VRS (Variety Replacement Strategy)	i. To evaluate the adaptation of BRRI released Rice varieties in different region of the country. ii. To compare the modern rice variety with local variety. iii. To select appropriate variety for specific region. iv. To disseminate the modern varieties throughout the country.	Gopalganj, Bagerhat and Narail
10.	Demonstration of newly released T. Aus , T. Aman and Boro varieties	To disseminate and popularize the newly released rice varieties in the Gopalgang, Narail and Bagerhat District	Gopalganj, Bagerhat and Narail
11.	Intensification of Boro-Fallow-Fallow cropping pattern through of floating vegetable in deep water ecosystem of Gopalganj	i.To identify the suitable BRRI varieties of low land area of Gopalganj ii. To increase the cropping intensity	Gopalganj