Bangladesh Rice Research Institute
Plant Breeding Division
Summary Research Program for Aus and T. Aman 2025-26

Program Area (01): Varietal Development Program (VDP)
Sub-Program (01): Plant Breeding

Summary of RYT, ALART and PVT, T. Aman 2025-26

SN	Experiments	Specific Objective(s)	Materials & Method	PI and CI	Location
Regional Yield Trial (RYT)					
	Project-01: Development of Rice Varieties for Upland (DSR Aus) Ecosystem				
1	Regional Yield Trial (RYT)	Evaluation of genotypes to investigate agronomic performance, specific and general adaptability under on station condition	Eight advanced DSR genotypes will be tested along with two checks BRRI dhan65 & BRRI dhan83	Investigators: Scientists of R/S, MAR, NJ & AAS	Kushtia, Sirajganj, Sonagazi, Rajshahi, Cumilla, Gazipur, Rangpur, Shibchar (Madaripur), Jhenaidah and Faridpur (Charvadrason).
	Project 02: Development of Transplanted Aus (T. Aus) Rice				
2-3	Regional Yield Trial (RYT#1-Favorable & RYT#2-Heat Tolerant)	Evaluation of agronomic performance, specific and general adaptability under on station condition	Twelve RYT#1 for favorable and four for RYT#2 for Heat tolerant entries will be evaluated against different checks: BRRI dhan48 & BRRI dhan98 (RYT#1); BRRI dhan98, BINA dhan14 & N22 (RYT#2).	PI: M K CI: A R & Scientists of R/S	BRRI Gazipur, Rangpur, Rajshahi, Kushtia, Cumilla, Sonagazi (RYT#1); BRRI Gazipur, Rangpur, Rajshahi, Kushtia (RYT#2)
	Project-04: Development of Rainfed Lowland Rice, T. Aman				

Bangladesh Rice Research Institute
Plant Breeding Division
Summary Research Program for Aus and T. Aman 2025-26

SN	Experiments	Specific Objective(s)	Materials & Method	PI and CI	Location
4-7	Regional Yield Trial (RYT#1, 2, 3 & 4)	To evaluate specific and general adaptability of the advance breeding lines as compared with standard checks in on-station condition	A total of 17, 14, 12 and 13 advanced lines will be tested in RYT#1, RYT#2, RYT#3 and RYT#4 along with checks BRRI dhan71, BRRI dhan75 BRRI dhan49, BRRI dhan87 and BRRI dhan103, respectively.	PI: MRAS CI: MA, RRM & Scientist of R/S	BRRI Gazipur and 7-8 Regional stations
	Project 06: Development of Salt Tolerant Rice				
8-10	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-farm condition	Total 28 (8 entries in RYT-1, 10 entries in RYT-2 and 10 entries in RYT-3) genotypes along with 3 checks will be evaluated in RYT1 and RYT2, respectively. Checks: BRRI dhan54, BRRI dhan87 & BRRI dhan73	PI: MAR CI: NJ, AAS, RFD, MMR, & R/S	Gazipur, Sonagazi, Cumilla, Rajshahi, Gopalganj, Satkhira (BRRI farm, Kaliganj & Debhata), (8-10 locations)
	Project-7b: Development of Premium Quality Rice (PQR) for T. Aman				
11	Regional Yield Trial (RYT# BRRI dhan90 type)	Evaluation of genotypes to investigate agronomic performance, specific and general adaptability under on station condition	Total 9 advanced lines will be tested along with checks BRRI dhan34, BRRI dhan70, BRRI dhan90, Dudshail & Kataribhog (Dinajpur)	PI: Scientist of concern BRRI R/S CI: MRI, AR, STT SMZ, SG and KMI	Gazipur, Rajshahi, Rangpur, Dinajpur, Kushtia, Cumilla, Sherpur, Sirajganj, Sonagazi, Barishal
12	Regional Yield Trial (RYT# BRRI dhan90 type)	Evaluation of genotypes to investigate agronomic performance, specific and general adaptability under on station condition	Total 9 advanced lines will be tested along with checks BRRI dhan34, BRRI dhan70, BRRI	PI: Scientist of concern BRRI R/S CI: MRI, AR, STT SMZ, SG and KMI	Gazipur, Rajshahi, Rangpur, Dinajpur, Kushtia, Cumilla,

Bangladesh Rice Research Institute
Plant Breeding Division
Summary Research Program for Aus and T. Aman 2025-26

SN	Experiments	Specific Objective(s)	Materials & Method	PI and CI	Location
			dhan90, Dudshail & Kataribhog (Dinajpur)		Sherpur, Sirajganj, Sonagazi, Barishal
	Project-10: Development of Zinc Enriched Rice, T. Aman				
13	Regional yield Trial (RYT)	Evaluation of agronomic performance, specific and general adaptability under on station condition	A total 09 entries will be tested against standard check varieties BRRI dhan49, BRRI dhan72, BRRI dhan75, BRRI dhan87 and BRRI dhan103	PI: MAK CI: RRM, SSC, IHJ & Scientist of R/S	Total 9 locations
	Project-12: Development of Disease Resistant Rice (BB & Blast)				
14	Regional Yield Trial (RYT-BB and RTV)	Evaluation of agronomic performance, specific and general adaptability under on-station conditions	In RYT, six entries will be tested in the replicated yield trial against susceptible and standard check varieties BRRI dhan75, BRRI dhan87, BRRI dhan49 and resistant check IRBB60.	PI: M K CI: A R & Scientists of R/S	BRRI Farm, Gazipur, Rangpur, Rajshahi, Kushtia, Cumilla, Sonagazi & Sirajganj
	Project-14: Development of Submergence and Water Stagnation Tolerance Rice Varieties				
15-16	Regional Yield Trial (RYT/PVS)	To evaluate the specific and general adaptability of the advanced breeding lines as compared with standard checks in on-farm condition	Two PVS one with 10 early and another one with 10 late genotypes along with three checks depending on growth will be evaluated. Checks are: BRRI dhan52, BRRI dhan79, BRRI dhan110, BINA dhan11 and BRRI dhan103	PI: SG CI: SMZ, AR, MMY, KMI and R/S Scientist	Gazipur, Rangpur (2), Kurigram, Lalmonirhat, Gaibandha (7 locations)
	Project-15: Development of Drought Tolerant Rice, T. Aman				

Bangladesh Rice Research Institute
Plant Breeding Division
Summary Research Program for Aus and T. Aman 2025-26

SN	Experiments	Specific Objective(s)	Materials & Method	PI and CI	Location
17	Regional Yield Trial (RYT)	To evaluate specific and general adaptability of the advance breeding lines as compared with standard checks in on-station condition	A total 09 advanced lines will be tested along with checks BRRI dhan71 & BRRI dhan75	PI: MAK CI: RRM, SSC, MIHJ & Scientist of R/S	Gazipur, Rajshahi R/S (Tanore, Idulpur, Chapai Nawabganj), Rangpur (Sadar, Nilphamari, Kurigram), Kushtia
	Project-18: Development of photosensitive Rice, T. Aman				
18	Regional Yield Trial (RYT)	Evaluation of genotypes to investigate agronomic performance, specific and general adaptability under on station condition	A total eight (8) advanced lines will be tested along with five (5) checks BR22, BR23, Gainja, Malshira and Nazirshail	PI: Scientist of concern BRRI R/S CI: MRI, AR, STT SMZ, SG and KMI	Gangachara (Tista River bed), Bogura (Jamuna River bed) Sirajganj, Cumilla (B. Baria), Sonagazi, Satkhira, Habiganj Bhanga (Char land), Kushtia and BRRI HQ
Advance Line Adaptive Research Trial (ALART)					
	Project-02: Development of Upland Aus (B. Aus) Rice				
1	Advanced Line Adaptive Research Trial (ALART)- DSR. Aus	On-farm evaluation of advanced breeding lines compared to standard checks for testing their specific and general adaptability	A total 4 (four) advanced breeding lines (BR12248-5R-22, BR12248-5R-37, BR10756-2B-8-72 & BR12860-5R-79) will be tested along with check BRRI dhan83.	PI: Scientist of ARD CI: MAR, NJ, AAS & RFD	Locations will be finalized by ARD. Probable 10 locations: Kushtia, Sirajganj, Sonagazi, Rajshahi, Cumilla, Gazipur, Rangpur, Shibchar

Bangladesh Rice Research Institute
Plant Breeding Division
Summary Research Program for Aus and T. Aman 2025-26

SN	Experiments	Specific Objective(s)	Materials & Method	PI and CI	Location
					(Madaripur), Jhenaidah and Faridpur (Charvadrason).
2	Advanced Line Adaptive Research Trial (ALART)- Jhum Rice, DSR Aus	On-farm evaluation of advanced breeding lines compared to standard checks for testing their specific and general adaptability	A total 3 (three) promisingly performed inbred rice varieties; BRRI dhan66, BRRI dha71 and BRRI dhan83 will be tested along with location-specific best performer local check cultivar	PI: Scientist of ARD CI: MAR, NJ, AAS & RFD	Locations will be finalized by ARD (may be sought guidance/ suggestions from) covering three hill districts of Chattogram. Probable 10 locations: Khagrachori districts: Sadar (2 locations), and Matiranga (1 location) Rangamati districts: Sadar (2 locations), and Kaptai (1 location). Bandarban districts: Sadar (2 locations), and Rowangchori (2 locations)
	Project-06: Development of Salt Tolerant Rice				

Bangladesh Rice Research Institute
Plant Breeding Division
Summary Research Program for Aus and T. Aman 2025-26

SN	Experiments	Specific Objective(s)	Materials & Method	PI and CI	Location
3	Advanced Line Adaptive Research Trial (ALART)- STR (Photosensitive)	On-farm evaluation of advanced breeding lines compared to standard checks for testing their specific and general adaptability in different agro-ecological zones (AEZs) to nominate for proposed variety trial (PVT).	In ALART (STR-Photosensitive), three selected materials (BR12465-4R-61, BR12465-4R-231, BR12459-4R-113) will be evaluated through BRRI recommended practices with check varieties BRRI dhan30 and BR23	PI: Scientist of ARD CI: MAR, NJ, AAS RFD	10 locations (3 locations at Khulna and Satkhira, 2 locations at Sonagazi and Companiganj, Noakhali, Cumilla, Rangpur, Gazipur, Gopalganj, Barishal/ Patuakhali
	Project-15: Development of Drought Tolerant Rice, T. Aman				
4	Advanced Line Adaptive Research Trial (ALART)	Evaluation of specific and general adaptability under on farm condition.	A total two advanced lines (BR11788-5R-27) and BR12314-5R-180) will be tested along with checks BRRI dhan71 and BRRI dhan75	PI: MAK CI: RRM, SSC, MIHJ & Scientist of R/S	10 locations (Location will be selected by ARD)
	Project-18: Development of Photosensitive Rice, T. Aman				
5	Advanced Line Adaptive Research Trial (ALART)	On-farm evaluation of advanced breeding lines compared to standard checks for testing their specific and general adaptability	A total of two advanced lines (BR10212-17-3-2-2 and BR10212-5-5-3) will be tested along with checks BR22, BR23	PI: Scientist of ARD CI: SMZ, MMY, AR, and KMI	10 locations (Location will be selected by ARD)
Proposed Variety Trial (PVT)					
Project-6: Development of Salt Tolerant Rice (STR), T. Aman					

Bangladesh Rice Research Institute
Plant Breeding Division
Summary Research Program for Aus and T. Aman 2025-26

SN	Experiments	Specific Objective(s)	Materials & Method	PI and CI	Location
1	Proposed Variety Trial (PVT)	On-farm evaluation of advanced breeding lines compared to standard checks for release as Variety	One selected genotype (BR13113-4R-63) will be evaluated following BRRI recommended practices with check variety BRRI dhan75	SCA	10 locations (Locations will be selected by SCA)
	Project-18: Development of photosensitive Rice, T. Aman				
2	Proposed Variety Trial (PVT)	On-farm evaluation of advanced breeding lines compared to standard checks for release as Variety	One (1) selected genotype (**BR10212-5-5-3**) will be evaluated under integrated improved BRRI recommended management practices for photosensitive rice compared with standard check variety BRRI dhan22 and BRRI dhan23	PI: SCA	10 trial sites will be selected by SCA in the following location: Sirajganj, B. Baria, Cumilla, Sonagazi, Sherpur/Mymensingh, Satkhira, Gopalganj Habiganj Bhanga, and BRRI HQ

Bangladesh Rice Research Institute

Plant Breeding Division

Summary Research Program for Aus and T. Aman 2025-26

SN	Experiments	Specific Objective(s)	Materials & Method	PI and CI	Location	Budget (Lakh Taka)
1a	**Project-1: Development of Rice Varieties for Upland (DSR Aus) Ecosystems Project Leader: Dr. Md. Akhlasur Rahman**					
1.1a	Hybridization	To create variations for the development of new genotypes with high yield, drought tolerant, adaptable to direct seeded condition with acceptable grain quality	55 parents will be used in hybridization	PI: MAR CI: NJ, AAS	Gazipur	**Total: 12 lakh (PARTNER)**
1.2a	Confirmation of F_1	To confirm the crosses as true F_1s and use of the selected F_1s to produce F_2 seeds	24 crosses will be grown	PI: NJ CI: MAR, AAS	Gazipur	
1.3a	Segregating RGA (F_2-F_5)	Generation Advance	3008 progenies will be advanced	PI: MAR CI: NJ	Gazipur	
1.4a	Line Stage Testing (LST)	To select uniform genotypes in terms of plant height and days to flowering with key target traits	5204 breeding lines will be evaluated	PI: MAR CI: NJ, AAS & RFD	Gazipur	
1.5a	Observational Yield Trial (OYT)	Selection of superior lines with desired agronomic characters	Total 245 advanced lines will be tested along with checks BRRI dhan83, BRRI dhan65, BRRI dhan43 & Hasikalmi	PI: NJ CI: MAR	Gazipur	
1.6a	Preliminary Yield Trial (PYT)	Initial evaluation of breeding lines for yield potential in replicated trial	Total 19 advanced lines will be tested along with checks BRRI dhan83, BRRI dhan65, BRRI dhan43 and Hasikalmi	PI: MAR CI: NJ, AAS & RFD	Gazipur,	
1.7a	Advanced Yield Trial (AYT)	Evaluation of breeding lines for yield potential in replicated trial	Total 15 advanced lines will be tested along with checks BRRI dhan83,	do	Gazipur, Sonagazi, Feni	

Bangladesh Rice Research Institute
Plant Breeding Division
Summary Research Program for Aus and T. Aman 2025-26

SN	Experiments	Specific Objective(s)	Materials & Method	PI and CI	Location	Budget (Lakh Taka)
			BRRI dhan65, BRRI dhan43 and Hasikalmi			
1.8a	Regional Yield Trial (RYT)	Evaluation of genotypes to investigate agronomic performance, specific and general adaptability under on station condition	Total 8 advanced lines will be tested along with checks BRRI dhan83, BRRI dhan65	Investigators: Scientists of R/S, MAR CI: NJ, AAS & RFD	Kushtia, Sirajganj, Sonagazi, Rajshahi, Cumilla, Gazipur, Rangpur, Shibchar, Madaripur	
1.9a	Maintenance breeding	Maintaining seed purity and seed increase of landraces	Seeds of 100 landraces/varieties adaptable to upland/DSR and *Jhum* ecosystem will be increased	PI: NJ CI: MAR, AAS	Gazipur	
1.10a						

Expected Output: High yielding rice varieties adaptable to aerobic upland conditions through DSR and dibbling method will be developed.

SN	Experiments	Specific Objective(s)	Materials & Method	PI and CI	Location	Budget (Lakh Taka)
1b	**Project-1b: Development of high yielding *jhum* Rice Project Leader: Dr. Md. Akhlasur Rahman**					
1.1b	Hybridization	To create variations for the development of new genotypes with drought tolerance at seedling stage with acceptable grain quality	35 parents will be used for hybridization	PI: MAR CI: NJ, AAS	Gazipur	**12.0 PARTNER**
1.2b	Confirmation of F_1	To confirm the crosses as true F_1s and use of the selected F_1s to produce F_2 seeds	30 crosses will be grown	PI: NJ CI: MAR, AAS	Gazipur	
1.3b	Segregating RGA (F_2-F_5)	Generation Advance	5222 progenies will be advanced	do	Gazipur	

Bangladesh Rice Research Institute
Plant Breeding Division
Summary Research Program for Aus and T. Aman 2025-26

1.4b	Advanced Yield Trial (AYT)	Evaluation of breeding lines for yield potential in replicated trial	Total 8 advanced lines will be tested along with checks Ellong dhan and BRRI dhan83	do	Gazipur, Bandarban, Khagrachori and Rangamati	
1.5b	Advanced Line Adaptive Research Trial (ALART)-Jhum Rice, DSR Aus	On-farm evaluation of advanced breeding lines compared to standard checks for testing their specific and general adaptability	A total 3 (three) promisingly performed inbred rice varieties; BRRI dhan66, BRRI dha71 and BRRI dhan83 will be tested along with location-specific best performer local check cultivar.	PI: Scientist of ARD CI: MAR, NJ, AAS & RFD	Locations will be finalized by ARD (may be sought guidance/ suggestions from Plant Breeding Division for site selection at Jhum area) covering three hill districts of Chattogram. Probable 10 locations: Khagrachori districts: Sadar (2 locations), and Matiranga (1 location) Rangamati districts: Sadar (2 locations), and Kaptai (1 location). Bandarban districts: Sadar (2 locations), and Rowangchori (2 locations)	
1.6b	Maintenance of parents	Maintenance of parent for future use in the hybridization or in the experiment as check variety	Total 20 advanced line and landraces will be grown	do	Gazipur	

Expected Output: High yielding rice varieties adaptable to hill tracts for *jhum* cultivation will be developed for *Jhum* Rice

SN	Experiments	Specific Objective(s)	Materials & Method	PI and CI	Location	Budget (Lakh Tk.)
2	**Project-02: Development of Transplanted Aus (T. Aus) Rice** **Project leader: Dr. Mahmuda Khatun**					**12.0** **PARTNER**

Bangladesh Rice Research Institute

Plant Breeding Division

Summary Research Program for Aus and T. Aman 2025-26

SN	Experiments	Specific Objective(s)	Materials & Method	PI and CI	Location	Budget (Lakh Tk.)
2.1	Hybridization	Introgression of earliness, pre-harvest sprouting tolerance and tolerance to high temperature with acceptable grain quality	Total 30 parents will be grown in three different sets at 7 days interval to synchronize flowering.	PI: MK CI: AR	Gazipur	
2.2	Growing of F_1 populations	To confirm the crosses as true hybrid	Around 20 single, 5 back crosses will be confirmed and F_2 seed will be produced	do	Gazipur	
2.3	Segregating population	Advancement of segregating generations following single seed descent-based RGA method	17 F_2, 36 F_3, 51 F_4 and 37 F_5 populations will be advanced through RGA techniques	do	Gazipur	
2.4	LST	Screening of genetically fixed breeding lines for homogeneity, plant type, grain yield potential, grain quality and other attributes	Around 4500 breeding lines from 15 crosses will be grown in LST nursery	do	Gazipur	
2.5	Observational Yield Trial (OYT)	Selection of homogeneous breeding lines with acceptable grain quality having high yield with good plant type	More than 300 test entries along with 3 checks (BRRI dhan48, BRRI dhan83 and BRRI dhan98) will be evaluated	PI: MK CI: AR & Scientists of R/S	BRRI Gazipur Rajshahi, Kushtia & Rangpur	
2.6	Advanced Yield Trial (AYT)	To evaluate specific and general adaptability of the advance breeding lines as compared with standard checks under on station condition	A total of 12-15 high temperature tolerant advanced lines will be evaluated along with the check varieties: BRRI dhan98 & BRRI dhan48	do	BRRI Gazipur, Rajshahi, Rangpur and Kushtia	

Bangladesh Rice Research Institute
Plant Breeding Division
Summary Research Program for Aus and T. Aman 2025-26

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2.7	Regional Yield Trial (RYT)	Evaluation of agronomic performance, specific and general adaptability under on station condition	Seven entries for heat tolerant entries will be evaluated against different checks: BRRI dhan48 & BRRI dhan98 (RYT)	do	BRRI Gazipur, Rangpur, Rajshahi, Kushtia	

SN	Experiments	Specific Objective(s)	Materials & Method	PI and CI	Location	Budget (Lakh Taka)
3	**Project -3:** Development of Rice for Shallow Flooded and Deep-Water Environments **Project Leaders: Dr. K M Iftekharuddaula**					
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)	15 parents will be utilized to make 20 single crosses	PI: SMZ, CI: SG, MMY, and KMI	Gazipur, Deep water tank and Gopalgonj	**8 PARTNER**
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	A total of 14 single crosses will be confirmed	do	Do	
3.3	Segregating population	Advancement of segregating generations following single seed descent-based RGA method	A total 60 crosses comprising 15,527 progenies from F2 to F5 will be grown	do	Do	
3.4	Line Stage Testing	Screening of genetically homozygous lines for homogeneity, grain quality, grain yield potential	418 breeding lines of 19 single crosses (elite x elite) will be grown	do	Do	

Bangladesh Rice Research Institute
Plant Breeding Division
Summary Research Program for Aus and T. Aman 2025-26

SN	Experiments	Specific Objective(s)	Materials & Method	PI and CI	Location	Budget (Lakh Taka)
3.5	Observational Yield Trial (OYT)	Evaluation of tall breeding lines	A total 225 genotypes will be evaluated against three check varieties under shallow flooded conditions	do	Do	
3.6	Advanced Yield Trial (AYT#1 to AYT#3)	Yield evaluation of advanced breeding lines in replicated trials for shallow flooded sub-ecosystem	A total of 81 advanced breeding lines along with two checks varieties BRRI dhan91 and BRRI dhan111will be evaluated under shallow flooded conditions	do	Do	
3.7	Maintenance and seed increase of land races	Maintenance of seed purity and seed increase of land races	A total of 200 landraces adaptable under shallow flood and deep-water ecosystems will be grown and maintained	do	Gazipur	

Expected Output: Shallow flooded rice varieties will be developed with better yield target (4.5-5.0 t/ha)

SN	Experiments	Specific Objective(s)	Materials & Method	PI and CI	Location	Budget (Lakh Taka)
4	**Project 04: Development of Rainfed lowland Rice** **Project leader: Dr. Md. Ruhul Amin Sarker**					**25.0 GoB/PARTNER/RCGS**
4.1	Hybridization	Introgression of genes from diverged genetic background into rice varieties/lines for the improvement of standard T. Aman varieties.	30 parents will be used	PI: MRAS CI: MA, RRM	Gazipur	
4.2	Confirmation of F_1	To confirm the crosses as true hybrid	41 F_1 s will be grown	do	Gazipur	
	Quality check (QC) analysis of F1s					

Bangladesh Rice Research Institute

Plant Breeding Division

Summary Research Program for Aus and T. Aman 2025-26

SN	Experiments	Specific Objective(s)	Materials & Method	PI and CI	Location	Budget (Lakh Taka)
4.3	Maintenance of Parents	To ensure seed safety of different quality genotypes and for future use in the hybridization or in the experiment as check variety	Around 92 genotypes will be grown to maintain their genetic purity	do	Gazipur	
4.4	FRGA	Generation Advance	Sixty crosses of F2 and F3 generations comprising ~ 13,712 progenies	do	Gazipur	
4.5	Line Stage Test (LST)	Identification of uniform lines based on plant height, flowering date and grain type	7,186 breeding lines from 36 crosses	do	Gazipur	
4.6	Observational Yield Trial (OYT)	Selection of genetically fixed breeding lines with acceptable grain quality having high yield potential with good plant type	~1200 lines will be evaluated in OYT along with BRRI dhan75, BRRI dhan49, BRRI dhan52, BRRI dhan87 and BRRI dhan103	do and R/S	Gazipur and 10 Regional Stations	
4.7	Advanced Yield Trial (AYT#1 & AYT#2, AYT#3)	Confirmatory yield evaluation of advanced lines compared to standard checks	A total of 60 genotypes will be tested in AYT#1, AYT#2 and AYT#3 along with BRRI dhan75, BRRI dhan49, BRRI dhan87 and BRRI dhan103	do & R/S	Gazipur, Rangpur Cumilla and Rajshahi	
4.8	Regional Yield Trial (RYT#1, RYT#2, RYT#3 & RYT#4)	To evaluate specific and general adaptability of the advance breeding lines as compared with standard checks in on-farm condition	A total of 17, 14, 12 and 13 advanced lines will be tested in RYT#1, RYT#2, RYT#3 and RYT#4 along with checks BRRI dhan71, BRRI dhan75 BRRI dhan49, BRRI dhan87 and	PI: MRAS CI: MA, RRM & Scientist of R/S	BRRI Gazipur and 7-8 Regional stations	

Bangladesh Rice Research Institute
Plant Breeding Division
Summary Research Program for Aus and T. Aman 2025-26

SN	Experiments	Specific Objective(s)	Materials & Method	PI and CI	Location	Budget (Lakh Taka)
			BRRI dhan103, respectively.			

Expected Output: Short duration varieties (105-115 days) with 5.0-6.0 t/ha yield potential and medium duration (116-130 days) varieties with 6.0-7.0 t/ha yield potential will be developed.

SN	Experiments	Specific Objective(s)	Materials & Method	PI and CI	Location	Budget (Lakh Taka)
6	**Project 06: Development of Salt Tolerant Rice Project Leader: Dr. Md. Akhlasur Rahman**					**40.0 GOB, IRRI-NARes Network Trial & PARTNER**
6.1	Hybridization	Introgression of salinity tolerant genes in elite background of advanced genotypes	52 parents will be used	PI: MAR CI: NJ	Gazipur	
6.2	Confirmation of F_1 Quality check (QC) analysis of F1s	To confirm the crosses as true hybrid	60 F_1s will be grown	PI: MAR CI: NJ, AAS RFD	Gazipur	
6.3	FRGA and GRGA	Generation Advance	One hundred forty-four Crosses comprising ~ 55800 progenies	PI: NJ CI: MAR	Gazipur	
6.4	Line Stage Test (LST) Trial	Identification of uniform lines based on plant type, flowering uniformity and grain type	>4880 breeding lines from 40 crosses	PI: MAR CI: NJ, AAS RFD	Satkhira/ Gazipur	
6.5	Observational Yield Trial (OYT)	Selection of genetically fixed salt tolerant breeding lines with acceptable grain quality having high yield potential with good plant type	~425 Lines from LST along with five checks BR10, BR23, BRRI dhan30, checks BRRI dhan73, and BRRI dhan54 will be evaluated	PI: MAR CI: NJ, AAS RFD, MMR & R/S	Gazipur, Satkhira and Khulna	

Bangladesh Rice Research Institute

Plant Breeding Division

Summary Research Program for Aus and T. Aman 2025-26

SN	Experiments	Specific Objective(s)	Materials & Method	PI and CI	Location	Budget (Lakh Taka)
	Trait paneling of OYT lines	Assessment of presence/ availability of favorable alleles in breeding lines/population	Total 748 Lines	PI: NJ CI: MAR	Out Sourcing	
	Grain quality analysis of OYT, PYT, AYT & RYT lines	To evaluate key economic traits based on consumers preference	Total 1002 lines	PI: SSD CI: NJ, MAR	GQN	
6.6	Screening genotypes for salinity tolerance	To identify salt tolerant breeding lines through hydroponic systems	Total 600 lines	PI: Scientist of Plant Physiology CI: NJ, MAR	Plant Physiology Div	
6.7	Preliminary Yield Trial (PYT1 ,2 &3)	Initial yield evaluation of advanced lines compared to standard checks in replicated trial	266 genotypes along with five checks BR10, BRRI dhan73, BRRI dhan30 and BR23 and BRRI dhan54	PI: MAR CI: NJ, AAS RFD & MMR	Gazipur, Satkhira and Khulna	
6.8	Advanced Yield Trial (AYT#1&2)	Confirmatory yield evaluation of advanced lines compared to standard checks	58 genotypes along with five checks BR10, BRRI dhan73, BRRI dhan30 and BR23 and BRRI dhan54	PI: MAR CI: NJ, AAS RFD&TA	Gazipur, Satkhira and Khulna	
6.9	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-farm condition	Total 28 (8 entries in RYT-1, 10 entries in RYT-2 and 10 entries in RYT-3) genotypes along with 3 checks will be evaluated in RYT1 and RYT2, respectively. Checks: BRRI dhan54, BRRI dhan87 &BRRI dhan73	PI: MAR CI: NJ, AAS, RFD, MMR, & R/S	Gazipur, Sonagazi, Cumilla, Rajshahi, Gopalganj, Satkhira (BRRI farm, Kaliganj & Debhata), (8-10 locations)	
6.10	Line augmentation	To develop diverse pre-breeding materials with combination of	• 122 fixed lines with *xa5, xa13* and *Xa21* combination	PI: MAR	Gazipur	

Bangladesh Rice Research Institute
Plant Breeding Division
Summary Research Program for Aus and T. Aman 2025-26

SN	Experiments	Specific Objective(s)	Materials & Method	PI and CI	Location	Budget (Lakh Taka)
		multiple alleles of desired/important traits	will be evaluated in forward breeding trial. • Trait paneling breeding lines with Pikh, Pi21and Pi9 alleles	CI: NJ, AAS, RFD,		
6.11	Advanced Line Adaptive Research Trial (ALART)-STR (Photosensitive)	On-farm evaluation of advanced breeding lines compared to standard checks for testing their specific and general adaptability in different agro-ecological zones (AEZs) to nominate for proposed variety trial (PVT).	In ALART (STR-Photosensitive), three selected materials (BR12465-4R-61, BR12465-4R-231, BR12459-4R-113) will be evaluated through BRRI recommended practices with check varieties BRRI dhan30 and BR23	PI: Scientist of ARD CI: MAR, NJ, AAS RFD	10 locations (3 locations at Khulna and Satkhira, 2 locations at Sonagazi and Companiganj, Noakhali, Cumilla, Rangpur, Gazipur, Gopalganj, Barishal/ Patuakhali	
6.12	Proposed Variety Trial (PVT)	On-farm evaluation of advanced breeding lines compared to standard checks for release as Variety	One selected genotype (BR13113-4R-63) will be evaluated following BRRI recommended practices with check variety BRRI dhan75	SCA	10 locations (Locations will be selected by SCA)	
6.13	Maintenance breeding	Maintenance of donors/local and elite parents for future use in the hybridization or in the experiment as check variety	100 parents will be grown	PI: NJ CI: MAR, AAS, RFD	Gazipur	

Expected Output: Salt tolerant variety (ies) for farmers, consumers and miller's preference will be developed with better yield potential (7.5-8.0 t/ha)

a) Salt tolerant variety(ies) with salt tolerance at seedling stage (12 dS/m) and reproductive stage tolerance (EC = 8.0-10.0 dS/m) will be developed based on different stakeholders' demand such as farmers, consumers, miller's preference of target region

Bangladesh Rice Research Institute
Plant Breeding Division
Summary Research Program for Aus and T. Aman 2025-26

SN	Experiments	Specific Objective(s)	Materials & Method	PI and CI	Location	Budget (Lakh Taka)
7	**Project-7: Development of Premium Quality Rice (PQR) T. Aman** **Project leader: Dr. Khandakar Md. Iftekharuddaula**					
7.1	Hybridization	Introgression of genes of small grain (national grade) with or without aroma into high-yielding rice genetic background	38 hybridization parents will be utilized to make single crosses and five backcrosses will be continued from the previous year.	PI: MRI CI: AR, STT and KMI	Gazipur	**18.0 PARTNER** **2.90 LSTD**
7.2	Confirmation of F_1	To confirm the crosses as a true hybrid through 10 SNP QC genotyping	25 single crosses and two backcrosses will be confirmed	do	Gazipur	
7.3	Pedigree nursery (F_2 to F_5 generation advanced through FRGA)	Advancement of progenies with aroma, improved plant type, earliness, premium quality grain, and high yield potential	10788 progenies of 40 crosses will be advanced through FRGA	do	Gazipur	
7.4	Line Stage Testing (LST)	Selection of genetically fixed and homozygous lines for aroma, national grade PQR grain, higher grain yield potential with better plant type and major disease (blast & BLB) resistance	5071 fixed breeding lines of 43 crosses will be grown	do	Gazipur	
7.5	Observational Yield Trial (OYT#1 &2)	Evaluation and selection of genetically fixed lines with aroma, quality grain properties having high yield with good plant type.	A total of 400 advanced lines will be tested in two OYT along with checks BRRI dhan34, BRRI dhan70, BRRI dhan75, BRRI dhan90, Chinigura, Kataribhog	PI: MRI CI: AR, STT, SG and KMI	Gazipur, Dinajpur, & Rajshahi	
7.6	Advanced Yield Trial (AYT2_BRRI dhan90 type)	Advanced yield evaluation and selection of national grade BRRI dhan90 type aromatic advanced breeding lines compared to standard checks	A total of 33 advanced lines will be tested along with checks BRRI dhan34, BRRI dhan90 & BRRI dhan70	do	Gazipur, Dinajpur, & Rajshahi	
7.7	Advanced Yield Trial (AYT3_Kataribhog type)	Advanced yield evaluation and selection of national grade Kataribhog type aromatic advanced breeding lines compared to standard and local checks	A total of 14 advanced lines will be tested along with BRRI dhan70, BRRI dhan75, and Kataribhog	do	Gazipur, Dinajpur, & Rajshahi	
7.9	Regional Yield Trial (RYT1_BRRI dhan90 type)	Evaluation of regional and general adaptability of national grade BRRI dhan90	A total of 17 advanced lines will be tested along with	do	Gazipur, Rajshahi, Rangpur, Dinajpur, Cumilla, Kushtia,	

Bangladesh Rice Research Institute
Plant Breeding Division
Summary Research Program for Aus and T. Aman 2025-26

SN	Experiments	Specific Objective(s)	Materials & Method	PI and CI	Location	Budget (Lakh Taka)
		type aromatic advanced breeding lines compared to standard checks	checks BRRI dhan34, BRRI dhan90 & BRRI dhan70		Satkhira, Sonagazi, Netrokona and Sirajganj	
7.10	Regional Yield Trial (RYT2_Kataribhog type)	Evaluation of regional and general adaptability of national grade Kataribhog type aromatic advanced breeding lines compared to standard checks	A total of 17 advanced lines will be tested along with checks BRRI dhan70, BRRI dhan75 & Kataribhog (Dinajpur)	do	Gazipur, Rajshahi, Rangpur, Dinajpur, Cumilla, Kushtia, Satkhira, Sonagazi, Netrokona and Sirajganj	
	Maintenance Breeding and purification of GWAS core panel	Purification and maintenance of elite breeding lines and local germplasm for future use in core breeding program	A total of 350 advanced line and landraces will be grown	do	Gazipur	

Expected Output: National grade Premium Quality Rice (PQR) for T. Aman season will be developed with potential yield target (3.5 – 4.5 t/ha)

	Project-10: Development of Antioxidant enriched Rice, T. Aman **Project leader: Dr. Sharmistha Ghosal**					
SN	**Experiments**	**Specific Objective(s)**	**Materials & Method**	**PI and CI**	**Location**	**Budget (Lakh Taka)**
10.1	Hybridization	Accumulation of anthocyanin, phenolic compound, flavonoid,Vit E, etc in Low GI backrground of Rice	30 parental lines will be utilized to make 20 crosses	PI: SG CI: SMZ, MMY and KMI	Gazipur	**Total: 8 lakh (PARTNER)**
10.2	Confirmation of F_1	To confirm the crosses as a true hybrid	14 crosses will be confirmed	do	Gazipur	
10.3	Pedigree nursery (advanced through FRGA)	Advancement of progenies with improved plant type, earliness, premium quality grain, high anthocyanin content, and high yield potential	30,246 progenies from F2 to F5 progenies of 82 crosses will be advanced	do	Gazipur	
10.4	Line Stage Testing	Evaluation of genetically homozygous lines for homogeneity, grain quality, grain yield potential and Anthocyanin gene	315 fixed breeding lines of 23 crosses will be grown and homozygous	do	Gazipur	

			lines with high yield potential will be selected			
10.5	Observational Yield Trial (OYT#1 to OYT#3)	Selection of genetically fixed lines having high C3G content and high yield potential	A total of 544 advanced lines will be tested with two checks varieties	do	Gazipur	
10.6	Advanced Yield Trial (AYT#1 and #3)	Initial yield evaluation of advanced lines compared to standard checks	A total of 131 advanced lines will be tested along with two checks varieties	do	Gazipur	
10.7	Maintenance of Parents	Maintenance of parents for future use in the hybridization or in the experiment as check variety	A total of 79 advanced lines and landraces will be grown and maintained	do	Gazipur	
10.8	Advanced Yield Trial#1 (Aroma)	Confirmatory yield evaluation of advanced lines compared to standard checks	A total of eight genotypes along with two check varieties ie proposed BRRI dhan118 and BRRI dhan70	do	Gazipur	
10.9	Advanced Yield Trial #2 (Non-Aroma)	Confirmatory yield evaluation of advanced lines compared to standard checks	A total of six genotypes along with two check varieties BRRI dhan87 and BRRI dhan103	do	Gazipur	
10.10	Maintenance of Parents	Maintenance of parents for future use in the hybridization or in the experiment as check variety	A total of 120 C3G-enriched advanced lines and landraces will be grown and maintained	do	Gazipur	

Expected Output: Anti-oxidant enriched high yielding varieties will be developed

SN	Experiments	Specific Objective(s)	Materials & Method	PI and CI	Location	Budget (Lakh Taka)
11	**Project-11: Development for Zinc Enriched Rice, T. Aman** **Project leader: Dr. Md. Abdul Kader**					
11.1	Hybridization	Development of new genotypes with high zinc and iron content	Totally 19 single crosses will be made with 15 parents	PI: MAK CI: RRM,	Gazipur	**24.0**

Bangladesh Rice Research Institute
Plant Breeding Division
Summary Research Program for Aus and T. Aman 2025-26

SN	Experiments	Specific Objective(s)	Materials & Method	PI and CI	Location	Budget (Lakh Taka)
		along with resistance to major insect pests and diseases, abiotic stress tolerance and acceptable grain quality		SSC, IAJ		GOB
11.2	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	Twenty three crosses will be confirmed and F_2 seed will be produced	do	Gazipur	
11.3	Pedigree nursery (advanced through FRGA)	Generation advancement	Eighty crosses comprising ~ 25,975 progenies	do	Gazipur	
11.4	Line Stage Test (LST) Trial	Identification of uniform lines based on plant height, flowering date and grain type	10,893 breeding lines of 48 crosses	do	Gazipur	
11.5	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	Totally 372 genotypes will be evaluated against BRRI dhan49, BRRI dhan62, BRRI dhan72, BRRI dhan87 and BRRI dhan103	do	Gazipur	
11.6	Advanced Yield Trial (AYT)	Confirmatory yield evaluation of advanced lines compared to standard checks	A total of 91 genotypes will be tested in two AYTs. In AYT#1, 37 genotypes along with BRRI dhan62, BRRI dhan71, BRRI dhan72 and in AYT#2, 54	do & R/S	Gazipur, Rangpur and Cumilla	

Bangladesh Rice Research Institute
Plant Breeding Division
Summary Research Program for Aus and T. Aman 2025-26

SN	Experiments	Specific Objective(s)	Materials & Method	PI and CI	Location	Budget (Lakh Taka)
			genotypes with BRRI dhan49, BRRI dhan72, BRRI dhan87 and BRRI dhan103 will be evaluated			
11.7	Regional yield Trial (RYT)	Evaluation of agronomic performance, specific and general adaptability under on station condition	Best entries will be selected from nine entries tested against standard check varieties BRRI dhan49, BRRI dhan72, BRRI dhan75, BRRI dhan87 and BRRI dhan103	Do & R/S	Total 09 locations	

Expected Output: High yielding Zn enriched rice varieties with >7.0 t/ha yield potential will be developed.

SN	Experiments	Specific Objective(s)	Materials & Method	PI and CI	Location	Budget (Lakh Taka)
12	**Project 12: Development of Insect Resistant Rice (IRR)** **Project Leader: Dr. Md. Ruhul Amin Sarker**					**15.0** GOB, PARTNER
12.1	Hybridization	Introgression of genes of BPH, WBPH, GLH and gall midge into high yielding rice genetic background	18 well characterized parents will be used for ~30 crosses	PI: MRAS, CI: MA, MAR, NJ, RFD	Gazipur	
12.2	Confirmation of F_1 Quality check (QC) analysis of F_1s	To confirm the crosses as true hybrid	43 crosses will be grown	do	Gazipur	
12.3	Line Augmentation	Introgression of bph genes (*bph17* and *bph32*) to develop advanced breeding lines	Three F_1, three BC1F1crosses will be made and 2 BC_1F3 seed will be produced	do	Gazipur	
12.4	FRGA	Generation Advance	More than 19626 progenies from 109 crosses (F2-F5 generations) will be grown	do	Gazipur	

Bangladesh Rice Research Institute
Plant Breeding Division
Summary Research Program for Aus and T. Aman 2025-26

SN	Experiments	Specific Objective(s)	Materials & Method	PI and CI	Location	Budget (Lakh Taka)
12.5	Line Stage Testing (LST)	Identification of uniform lines based on good plant type, flowering date and grain type	~ 6200 breeding line from 40 crosses will be used	do		
12.6	Observational Yield Trial (OYT)	Selection of genetically fixed breeding lines with resistant to BPH/GM, earliness having high yield with good plant type	Selected 358 lines will be evaluated with four checks (BRRI dhan33, BRRI dhan87, BRRI dhan52 and BRRI dhan103)	PI: MRAS, CI: MA, MAR, NJ, RFD, MMH MMsH, SSD and Scientists of R/S	Gazipur, Rangpur, Cumilla and GQN	
	Trait paneling of OYT lines	Assessment of presence/availability of favorable alleles in breeding lines/population				
	Grain quality analysis of OYT, PYT & AYT lines	To evaluate key economic traits based on consumers preference				
12.7	Advanced Yield Trial (AYT)	To evaluate/confirm yield performance of the advance breeding lines as compared with standard checks at multi-locations trials	Selected 83 lines (AYT#1=48 and AYT#2=35) will be evaluated with checks: BRRI dhan33, BRRI dhan49, BRRI dhan87 and BRRI dhan103	PI: MRAS, CI: MA, MAR, NJ, RFD and R/S	Gazipur, Rangpur, Cumilla	
12.8	Screening breeding lines for BPH resistance	To identify new sources of BPH resistance	~ 500 breeding lines (OYT and AYT) will be evaluated for BPH resistance	PI: MMsH CI: MMH, MRAS, MA, NJ	Entomology Division, BRRI	
12.9	Maintenance and seed increase of key parents.	To maintain genetic purity of parent materials with seed production	Seeds of 119 key parents for breeding program will be increased and their genetic purity will be maintained	PI: MRAS, CI: MA, MAR, NJ, RFD	Gazipur	

Expected output: BPH and Gall midge resistant variety will be developed with better yield potential (6.0-7.0 t/ha). Promising genotypes will be selected after evaluation and will be used as parent materials and also will be included in yield trial.

Bangladesh Rice Research Institute

Plant Breeding Division

Summary Research Program for Aus and T. Aman 2025-26

SN	Experiments	Specific Objective(s)	Materials & Method	PI and CI	Location	Budget (Lakh Taka)
13	**Project-13: Development of Disease Resistant Rice (BB, Blast & RTV)** **Program leader- Dr. Mahmuda Khatun**					**10.0 GOB, TRB-BRRI**
13.1	Hybridization	Introgression of high yield, lodging tolerance and disease resistance trait for BB, Blast & RTV	Crosses will be done using 20 parents for BB, Blast & RTV	PI: MK CI: AR	Gazipur	
13.2	F_1 confirmation	To confirm the crosses as true hybrid	A total of 25 crosses for BB, Blast and RTV will be confirmed	do	Gazipur	
13.3	Segregating population	Advancement of segregating generations following single seed descent-based RGA method	~62700 progenies from 103 crosses for BB and Blast will be advanced through RGA techniques	do	Gazipur	
13.4	Line Stage Testing (LST)	Identification of uniform lines based on good plant type, flowering date and grain type	~ 4800 breeding lines from 16 crosses will be used	do	Gazipur	
13.5	Observational Yield Trial (OYT)	Selection of homogeneous breeding lines with acceptable grain quality having high yield with good plant type	A total of 150 entries for BB will be evaluated against susceptible & standard checks: BRRI dhan87 and BRRI dhan49.	PI: M K CI: A R & Scientists of R/S	BRRI Farm, Gazipur, Rangpur, Rajshahi & Cumilla.	
13.6	Advanced Yield Trial (AYT)	To evaluate/confirm the yield performance of the advanced breeding lines as compared with standard checks at multi-location trials	A total of twenty entries for BB will be evaluated against susceptible & standard checks: BRRI dhan87 and BRRI dhan49.	PI: M K CI: A R & Scientists of R/S	BRRI Farm, Gazipur, Rangpur, Rajshahi & Cumilla.	
13.7	Regional Yield Trial (RYT-BB and RTV)	Evaluation of agronomic performance, specific and general	In RYT, six entries will be tested in the replicated yield trial against susceptible and standard	PI: M K	BRRI Farm, Gazipur,	

Bangladesh Rice Research Institute
Plant Breeding Division
Summary Research Program for Aus and T. Aman 2025-26

SN	Experiments	Specific Objective(s)	Materials & Method	PI and CI	Location	Budget (Lakh Taka)
		adaptability under on-station conditions	check varieties BRRI dhan75, BRRI dhan87, BRRI dhan49 and resistant check IRBB60.	CI: A R & Scientists of R/S	Rangpur, Rajshahi, Kushtia, Cumilla, Sonagazi & Sirajganj	
13.8	Maintenance and seed increase of key parents.	To maintain the genetic purity of parent materials with seed production	The seeds of 90 key parents for the breeding program will be increased and their genetic purity will be maintained	PI: MK CI: AR	Gazipur	

SN	Experiments	Specific Objective(s)	Materials & Method	PI and CI	Location	Budget (Lakh Taka)
14	**Project-14: Development of Submergence and Water Stagnation Tolerance Rice Varieties** **Program leader: Dr. K M Iftekharuddaula**					
14.1	Hybridization	Introgression of submergence and medium stagnant water tolerant genes into the modern genetic background with high yield potential, short/long growth duration, weakly/strongly photoperiod sensitivity, grain quality etc.	20 parents will be utilized to make 30 single crosses	PI: SG CI: SMZ, MMY, AR and KMI	Gazipur	**28.0 PARTNER**
14.2	F_1 confirmation	Confirmation of crosses with introgression of genes for submergence tolerance (particularly *SUB1*) and water	A total of 29 crosses will be confirmed	do	Gazipur	

Bangladesh Rice Research Institute
Plant Breeding Division
Summary Research Program for Aus and T. Aman 2025-26

SN	Experiments	Specific Objective(s)	Materials & Method	PI and CI	Location	Budget (Lakh Taka)
		stagnation tolerance into improved genetic background				
14.3	Segregating population advanced through FRGA	Advancement of segregating generations following single seed descent-based rapid generation advanced techniques	A total of 24,484 progenies from F_2 to F_6 of 104 crosses will be grown and advanced	do	Gazipur	
14.4	Line Stage Testing	Screening of genetically homozygous lines for homogeneity, grain quality, grain yield potential and *SUB1*-specific SNP markers	6,146 fixed breeding lines of 46 crosses (elite x elite) will be grown and selected based on uniformity and trait of interests	do	Gazipur	
14.5	Observational Yield Trial	Initial evaluation of the genotypes with tolerance against controlled submergence, rainfed, and flood prone farmers' field conditions	A total of 58 breeding lines will be evaluated in OYT under rainfed, controlled, and submergence prone farmers field conditions using four check varieties (BRRI dhan52, BRRI dhan79, BRRI dhan110 and BRRI dhan103)	do	Gazipur(2), Rangpur (2), Kurigram, Lalmonirhat (6 locations)	
14.7	Advanced Yield Trial (AYT#1 to AYT#8)	Advanced evaluation of yield and survivability of promising breeding lines in a replicated trial under controlled submergence and flash flood-prone farmers' field.	A total of 259 breeding lines will be evaluated under flood-prone areas of farmer's fields and rainfed & controlled on-station conditions against five standard checks (BRRI dhan52, BRRI dhan79, BRRI dhan110, BRRI dhan87 and BINA dhan11)	do	do	

Bangladesh Rice Research Institute
Plant Breeding Division
Summary Research Program for Aus and T. Aman 2025-26

SN	Experiments	Specific Objective(s)	Materials & Method	PI and CI	Location	Budget (Lakh Taka)
14.8	Advanced Yield Trial #2_Late (AYT#7_Late)	Advanced evaluation of yield and survivability of promising breeding lines in a replicated trial under controlled submergence and flash flood-prone farmers' field.	A total of 29 breeding lines will be evaluated under flood-prone areas of farmer's fields and rainfed & controlled on-station conditions against five standard checks (BRRI dhan52, BRRI dhan79, BRRI dhan110, BRRI dhan103 and BINA dhan11)	do	do	
14.9	Regional Yield Trial (RYT/PVS)	To evaluate the specific and general adaptability of the advanced breeding lines as compared with standard checks in on-farm condition	Six genotypes along with three checks depending on growth duration will be evaluated. Checks are: BRRI dhan52, BRRI dhan79, BRRI dhan110, BINA dhan11 and BRRI dhan103	PI: SG CI: SMZ, AR, MMY, KMI and R/S Scientist	Gazipur (2), Rangpur (2), Kurigram, Lalmonirhat, Gaibandha, Netrokona (8 locations)	
14.10	Maintenance of submergence and Stagnant flood tolerant genotypes	To ensure seed safety of submergence tolerant genotypes	Around 150 genotypes for will be grown to maintain their genetic purity.	do	Gazipur	
14.11	Screening and evaluation of Core parental material for submergence tolerance	Screening of Core parental material for submergence tolerance	Around 250 advanced line and land races along with five checks will be screened for submergence tolerance	do	Gazipur	

Bangladesh Rice Research Institute
Plant Breeding Division
Summary Research Program for Aus and T. Aman 2025-26

Expected Output: Submergence and Water Stagnation Tolerant varieties will be developed with yield target 6.0 to 6.5 t/ha

SN	Experiments	Specific Objective(s)	Materials & Method	PI and CI	Location	Budget (Lakh Taka)
15	**Project 15: Development of Drought Tolerant Rice Project leader: Dr. Md. Abdul Kader**					**25.00 PARTNER**
15.1	Hybridization	Introgression of drought tolerance gene into high yielding rice genetic background	Fourteen recipient and donor parents will be used for making 18 crosses	PI: MAK CI: RRM, SSC, IAJ	Gazipur	
15.2	Confirmation of F_1 Quality check (QC)analysis of F1s	To confirm the crosses as true hybrid	17 F_1 s will be grown	do	Gazipur	
15.3	Maintenance of Parents	To ensure seed safety of different quality genotypes and for future use in the hybridization or in the experiment as check variety	Around 43 genotypes will be grown to maintain their genetic purity.	do		
15.4	FRGA	Generation Advance	Seventy four crosses comprising ~ 25,065 progenies	do	Gazipur	
15.5	Line Stage Test (LST) Trial	Identification of uniform lines based on plant height, flowering date and grain type	4,580 breeding lines	do	Gazipur	
15.6	Observational Yield Trial (OYT)	Selection of homogeneous breeding lines with fine grain properties having high yield with good plant type.	A total of 398 genotypes will be tested in OYT#1 and OYT#2. In OYT#1, 248 genotypes along with BRRI dhan71, BRRI dhan75 and BRRI dhan87 and in OYT#2, 147 genotypes along with BRRI dhan49 and BRRI dhan87 will be evaluated.	do	Gazipur, Rangpur and Rajshahi	
15.6	Advanced Yield Trial (AYT)	Confirmatory yield evaluation of advanced lines compared to standard checks	A total of 13 genotypes will be tested in AYT along with BRRI dhan49, BRRI dhan71, BRRI dhan87 and BINA dhan17 in DSR and transplanted condition.	Do & R/S	Gazipur, Rangpur and Rajshahi	
15.6	Regional Yield Trial (RYT)	To evaluate specific and general adaptability of the advance breeding lines	In RYT#DTR, A total of nine advanced lines will be tested along	Do & R/S	Rajshahi R/S (Tanore,	

Bangladesh Rice Research Institute
Plant Breeding Division
Summary Research Program for Aus and T. Aman 2025-26

SN	Experiments	Specific Objective(s)	Materials & Method	PI and CI	Location	Budget (Lakh Taka)
		as compared with standard checks in on-farm condition	with checks BRRI dhan71 and BRRI dhan75. In RYT#Tungro, a total of four advanced lines will be tested along with checks BRRI dhan71 and BRRI dhan103.		Idulpur, Chapainawabganj), Rangpur (Sadar, Nilphamari, Kurigram), Kushtia	
15.7	Backcrosse, Feed the Future Innovation Lab for Climate Resilient Cereals (CRCIL)-Drought	Introgression of drought tolerance gene into high yielding rice genetic background	Four BC2F1 will be made	PI: RRM CI: RRM, SSC, IAJ	Gazipur	
15.8	F_1 confirmation, Feed the Future Innovation Lab for Climate Resilient Cereals (CRCIL)-Drought	To confirm the crosses (Backcrosses and Three way cross) as true hybrid	Nine F_1 s will be grown	Do & R/S	Gazipur	
15.9	Multi-location Trial of Drought tolerant germplasm in hotspot and controlled drought condition, Feed the Future Innovation Lab for Climate Resilient Cereals (CRCIL)-Drought	Evaluation of germplasm of drought tolerance under hotspot and controlled drought condition	A total of 420 germplasm with six check varieties will be tested along with checks	Do & R/S	Gazipur, Rajshahi (Tanore and Godagari)	
15.10	Line augmentation	Introgression of drought tolerance to develop advanced breeding lines	Four BC1F1crosses will be grown for producing BC2F1	Do & R/S	Gazipur	

Expected Output: Drought Tolerant Varieties will be developed with potential yield target (5.5 – 6.5 t/ha)

Bangladesh Rice Research Institute
Plant Breeding Division
Summary Research Program for Aus and T. Aman 2025-26

SN	Experiments	Specific Objective(s)	Materials & Method	PI and CI	Location	Budget (Lakh Taka)
17	**Project 17: Development of Transgenic High Beta-carotene Rice and High Iron & Zinc Rice (Healthier Rice)** **Project leader: Dr. Md. Abdul Kader**					
17a.1	**A. Golden Rice, Healthier Rice**					**Total: 25 lakh (T. Aman)**
	Seed multiplication of Contained Trial (CT) and Confined Field Trial (CFT)	Seed multiplication and preservation of seeds of CT and CFT for varietal evaluation	The seeds of 37 advanced lines of CT in the background of BRRI dhan48, BRRI dhan98 along with 12 advanced lines of CFT (seven GR2E BRRI dhan49 and five GR2E BRRI dhan62) will be multiplied.	PI: MAK CI: RRM, SSC, MIAJ	Gazipur	
	B. High Iron and Zinc rice, Healthier Rice					
17b.1	Backcross nursery	Introgression of high iron and zinc gene into high yielding different rice genetic backgrounds	Total two BC_3F_1 (BR11712-4R-93 and BRRI dhan98) and one BC_1F_2 (BRRI dhan103) and one BC_1F_1 (BRRI dhan105) will be made	PI: MAK CI: RRM, SSC, MIAJ	Gazipur	
17b.2	**Pedigree Nursery**	Generation Advancement of BC_3F_2 generation of BRRI dhan87*4/ IR 135160 TR-3-B-19	High iron and zinc trait containing progenies will be grown in BC_3F_2 generation	do	do	

Expected Output: GR2E and High Iron and Zinc enriched rice varieties will be developed with potential yield target (> 6.0 t/ha)

SN	Experiments	Specific Objective(s)	Materials & Method	PI and CI	Location	Budget (Lakh Taka)
18	**Project-18: Development of Photosensitive Rice, T. Aman** **Project leader: Dr. Khandakar Md. Iftekharuddaula**					
18.1	Hybridization	Introgression of region specific medium and strongly photosensitive trait (Ganja, Naizershail, Malshira, Biroi, BR22 and BR23 type) into	23 hybridization parents will be utilized to make single crosses	PI: MRI CI: AR, STT,	Gazipur	**12 LSTD**

Bangladesh Rice Research Institute
Plant Breeding Division
Summary Research Program for Aus and T. Aman 2025-26

SN	Experiments	Specific Objective(s)	Materials & Method	PI and CI	Location	Budget (Lakh Taka)
		high-yielding elite genetic background		SMZ and SG		
18.2	Confirmation of F_1	To confirm the crosses as a true hybrid through 10 SNP QC genotyping	22 single crosses will be confirmed	do	Gazipur	
18.3	Pedigree nursery (F_2 to F_5 generation advanced through FRGA)	Advancement of progenies medium and strongly photosensitive segregating progenies with high yield potential	13090 progenies of 56 crosses will be advanced through FRGA	do	Gazipur	
18.4	Line Stage Testing (LST)	Selection of genetically fixed homozygous medium and strongly photosensitive breeding lines with higher grain yield potential and better plant type	700 fixed breeding lines of 5 crosses will be grown	do	Gazipur	
18.5	Observational Yield Trial (OYT)	Evaluation and selection of genetically fixed region specific medium and strongly photosensitive breeding lines with higher grain yield potential and better plant type	A total of 62 advanced lines will be tested along with checks BR22, BR23, BRRI dhan49, Ganza, Malshira, Nazirshail	do	Tista river bed, Gangachara; Jamuna River bed, Bogura; B.Baria, Sonagazi and BRRI HQ	
18.6	Advanced Yield Trial (AYT)	Advanced yield evaluation of genetically fixed region specific medium and strongly photosensitive breeding lines with higher yield potential and better plant type	A total of 8 advanced lines will be tested along with checks BR22, BR23, BRRI dhan49, Ganza, Malshira, Nazirshail	do	Tista river bed, Gangachara; Jamuna River bed, Bogura; BRRI R/S, Cumilla, BRRI R/S	

Bangladesh Rice Research Institute
Plant Breeding Division
Summary Research Program for Aus and T. Aman 2025-26

SN	Experiments	Specific Objective(s)	Materials & Method	PI and CI	Location	Budget (Lakh Taka)
					Sonagazi and BRRI HQ	
18.9	Maintenance Breeding	Purification and maintenance of elite breeding lines and local germplasm parents for future use in core breeding program	A total of 150 advanced line and landraces will be grown	do	Gazipur	
18.10	Formation and purification of GWAS core panel	Purification of local landraces to form GWAS core panel for discover/identification of new genes/QTLs/SNPs for targeting medium and strongly photosensitive traits	250-300	do	Gazipur	

Expected Output: Medium and strongly photosensitive rice variety for T. Aman season will be developed with high potential yield target (4.5 – 5.5 t/ha)

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