CURRICULUM VITAE

Partha Sarathi Biswas

Chief Scientific Officer-Plant Breeding, Bangladesh Rice Research Institute, Gazipur-1701, Bangladesh.

PERSONAL DETAILS

Email: psbiswasbrri@yahoo.com, psbiswasbrri@gmail.com
Cell Phone: +8801552480813, +8801304447316

Date of Birth: 27 December, 1971
Sex: Male
Nationality: Bangladeshi (by birth)
Social Status: Married, 2 children
Present Address: 224/25, K-Block, West Joydebpur, Gazipur-1701
Permanent address: Vill- Gandharba, Post. Amrajhuri, Upazilla – Kawkhali, Dist. Pirojpur
Profession: Government Service (Research)

EDUCATION

- Postdoctoral Fellow in Molecular Plant Breeding, International Rice Research Institute, Philippnes (2016-2018)
- PhD in Genetics and Plant Breeding in 2012, Bangladesh Agricultural University, Mymensingh, Bangladesh. Thesis research at IRRI, Philippines (2008 to 2011).
- MS in Genetics and Plant Breeding in 2004, Bangladesh Agricultural University, Mymensingh, Bangladesh
- B.Sc in Agriculture in 1992 (held on 1996), Bangladesh Agricultural University, Mymensingh, Bangladesh

WORK EXPERIENCE

Chief Scientific Officer – Plant Breeding (July 2022 to date): Working as team the leader for the development of rice for favorable Boro and cold prone environments. Optimization of breeding methods and application of modern breeding strategies by using cutting breeding tools –speed breeding, forward breeding with RCMS, genomic selection

Principal Plant Breeder (April15, 2012 to July 2022): Working as team the leader for the development of nutritionally improved rice for favorable Boro and cold prone environments. Map QTLs for cold tolerance, arsenic phyto-toxicity tolerance and, iron and zinc content in grains. Apply MAS strategies using trait based SNP markers for enrichment of favorable allele frequencies cold tolerance, BLB and blast disease resistance, grain quality traits in the breeding program. Practice genomic selection approaches to capture small effect QTLs and genes underlying grain yield of rice to enhance genetic gain. Also, worked as team leader for the development and evaluation of transgenic Provitamin-A enriched (Golden) rice and micronutrient (Zinc, iron) enriched rice.

Postdoctoral Fellow (1 December 2016 to 30 November 2018) Working with IRRI's irrigated rice breeding team for population improvement through forward breeding tools and genomic selection strategies targeting to enhance genetic gain in grain yield and quality traits with resistance to major insect pests and diseases of rice.

Senior Plant Breeder (June 1, 2006 to April 14, 2012): Served as team leader for the development of Favorable Irrigated (Boro) rice, micronutrient (Zinc, iron) enriched rice, Cold tolerant rice and Arsenic tolerant rice suitable for Bangladesh condition. Develop and evaluate transgenic Provitamin-A enriched BRRI dhan29 Golden rice through marker assisted backcrossing at IRRI Philippines as PhD thesis scholar (2008-2011).

Plant Breeder (August 20, 1998 to May 31, 2006): Served as co-investigator to develop rice variety for Favorable Irrigated (Boro) and Deepwater rice ecosystem.

RESEARCH EXPERIENCES

- Breeding method optimization and application of cutting breeding tools (RGA, RCMS, genomic selection) in the breeding program in BRRI and IRRI for enhancing genetic gain in rice.
- Extensive rice research experience on development and deployment of rice varieties with high zinc, iron and Provitamin A enriched rice
- Experience on pre-breeding line development for cold tolerant rice and high zinc rice development
- Extensive research experience on QTL mapping and validation, marker assisted introgression (MAS and MABS), haplotype diversity analysis, molecular characterization, DNA fingerprinting, etc.
- Extensive analytical skill in QTL mapping and in the analysis of breeding trial and genotypic data using advanced statistical tools (R, Genstat, PBtools, Statistix, etc).
- Experience in locus and marker validation research through haplotype analysis for major BLB and Blast genes in rice
- Experience on high throughput and precision phenotyping of key agronomic traits in the breeding trials using drone driven imaging tools
- Extensive rice research experience on conventional breeding approach, conducting and evaluating breeding trials for micronutrient enriched rice suitable for irrigated and rainfed ecosystem, cold affected areas, haor areas, arsenic affected areas, cold affected areas
- Extensive rice research experience on participatory variety selection (PVS) and variety development program for cold prone irrigated and haor environments
- Extensive research experience in breeding irrigated rice for favorable and cold prone environments, biofortified rice for high zinc and provitamin A (Golden rice) content.
- Experience on coordinating research activities with multi-partner and multi-disciplinary research project (TRB-IRRI, TRB-BRRI, BRRI-BSMRAU-Cornell FFP project

for Arsenic tolerant rice, IRRI – BRRI collaborative projects for the development of Zinc enriched rice and Provitamin A enriched transgenic Golden rice)

- Experience on strong communication and coordination with different collaborators in national and international level. (eg. BSMRAU, BARC, BINA, BARI, DAE, IRRI, DANIDA, Cornell University etc.).
- Extensive experience on coordination of capacity building and training program for scientists, researchers, extension personnel and farmers
- Experienced on breeding research program preparation, execution and report writing
- Improvement of standard boro rice vatrieties. Varietal Development Program. Irrigated rice (Boro). Plant breeding division. BRRI Gazipur. 2004-05, 2005-06, 2006-07, 2007-08, 2011-12, 2012-13, 2013-14, 2014-15, 2015-16 and 2016-17, 2018-19, 2019-20.
- Breeding for cold tolerant rice. Irrigated rice (Boro). Plant breeding division. BRRI Gazipur.1988-1999, 2005-06, 2006-07, 2007-08, 2011-12, 2012-13, 2013-14, 2014-15, 2015- 16 and 2016-17, 2018-19, 2019-20
- Breeding for Iron dense rice. Varietal Development Program for T. Aman and Boro. Plant Breeding Division, BRRI, Gazipur. 2004, 2005, 2006 & 2007, 2011-12, 2012-13, 2013-14, 2014-15, 2015-16 and 2016-17
- Breeding for Super high yielding rice varieties (NPT). Varietal Development Program for Boro. Plant Breeding Division, BRRI, Gazipur. 2004-05, 2005-06, 2006-07, 2007-08. Breeding for low amylose rice. Irrigated rice (Boro) Plant breeding division. BRRI Gazipur. 2005-06, 2006-07, 2007-08 & 2011-12
- Participatory variety selection (pvs) and validation trial for cold tolerant genotypes in cold prone areas in Rangpur region under IAPP, Boro 2011-12
- Arsenic tolerant rice variety development in Bangladesh. Varietal Development Program for Boro. Plant Breeding Division, BRRI, Gazipur. 2005-06, 2006-07 & 2011-12.
- Breeding for disease resistance. Irrigated rice. Plant Breeding Division, BRRI, Gazipur. 2004- 05, 2005-06, 2006-07, 2007-08 & 2011-12.
- Participatory variety selection (pvs) intervention in Sunamganj for irrigated boro rice, Plant breeding division. BRRI Gazipur. 2004-05, 2005-06 & 2006-07
- Breeding for insect resistance. Irrigated rice (Boro). Plant Breeding Division, BRRI, Gazipur. 2004-05, 2005-06, 2006-07 & 2007-08
- Varietal Development Program for DWR. Plant Breeding Division, BRRI, Gazipur. 1999, 2000- 01 & 2001-02
- Validation and delivery of new technologies for increasing the productivity of flood prone rice lands in Bangladesh under IFAD project, Varietal development program for DWR. Plant Breeding Division, BRRI, Gazipur. 1999, 2000 & 2001

CONTRIBUTION TO RESEARCH AND DEVELOPMENT

- Development of BRRI dhan29 Golden Rice through marker assisted backcrossing and evaluation under contained and confined conditions at both IRRI and BRRI.
- Actively participated in the development of BRRI dhan45, BRRI dhan55, BRRI dhan59, BRRI dhan60, BRRI dhan62, BRRI dhan64, BRRI dhan68, BRRI dhan72, BRRI dhan74, BRRI dhan84 and BRRI dhan100
- Lead the team that developed Zinc enriched rice variety BRRI dhan64 released in 2014, BRRI dhan72 and BRRI dhan74 released in 2015, BRRI dhan84 released in 2017 and worked as co-investigator and released BRRI dhan62 in 2013.
- Lead the team that developed superior high yielding irrigated variety BRRI dhan59 and BRRI dhan60 released in 2013 and BRRI dhan68 released in 2014 and worked as co-investigator and released BRRI dhan55 in 2011.
- Lead the team that developed superior high yielding cold tolerant rice breeding population and identified and validated BR18 and Hbj.BVI as donor for seedling stage cold tolerance (2012 – 2014)
- Mapped QTL for cold tolerance from Hbj.BVI (3 Biotech 2017(7): 1-12), Arsenic phyto-toxicity tolerance from BRRI dhan47 (Euphytica 2016 (209):805-814) and high zinc content from Kalobokri (Under peer review process).
- Marker assisted introgression QTLs for cold tolerance from Hbj.VI, IR90688 and IR83222 into cold susceptible BRRI dhan28 and BRRI dhan58
- Actively worked as team member for the evaluation and analysis of breeding trials of IRRI's irrigated breeding programs
- Worked as team member in construction and characterization of IRRI's irrigated breeding panel
- Worked for the standardization of precision phenotyping protocol for breeding trials at IRRI
- Help in identification of deployable combinations of BLB and Blast locus across different geography in South and Southeast Asia
- Help in formulating and designing breeding strategies for IRRI's irrigated breeding program for favorable environment
- Help in testing breeding strategies for population improvement through forward breeding and genomic selection across different geography in South and Southeast Asia
- Lead the team that developed superior high yielding arsenic tolerant rice germplasms and validated BRRI dhan47 under natural and artificial high arsenic condition (2012-2014)
- Lead the team that developed superior high yielding arsenic tolerant rice germplasms and validated BRRI dhan47 under natural and artificial high arsenic condition (2012-2014)
- Lead the team that mapped QTLs for arsenic phyto-toxicity tolerance from a $F_{2:3}$ population of BRRI dhan45XBRRI dhan47 (2012-16).

STUDENT SUPERVISED

- Fahmida Akter, 2026. Identification and validation of quantitative trait loci (QTLs) for cold tolerance in rice. PhD Thesis. Gazipur Agricultural University, Salna, Gazipur.
- Namita Das, 2014. A Study on Simple Sequence Repeat (SSR) Marker Polymorphism in Rice. BS Thesis, Jahangir Nagor University, Savar, Dhaka, Bangladesh
- Sheikh Jafor Mohiuddin, 2015. Molecular Mapping 0f Quantitative Trait Loci Conferring Grain Zinc Content in Rice (*Oryza sativa* L.). MS Thesis. Bangabandhu Sheikh Mujibur Rahman Agricultural University, Gazipur-1706, Bangladesh
- Aparajita Kundu, 2015. Haplotype Diversity Analysis in Cold Tolerant Rice (*Oryza sativa* L*.).* MS Thesis. Bangabandhu Sheikh Mujibur Rahman Agricultural University, Gazipur-1706, Bangladesh
- Nasira Akter, 2016. Characterization of Near Isogenic Lines of BRRI dhan29 for Cold Tolerance at Seedling Stage*).* MS Thesis. Bangabandhu Sheikh Mujibur Rahman Agricultural University, Gazipur-1706, Bangladesh
- Namita Das, 2016. Development of Molecular Markers for Cold Tolerance at Seedling Stage in Rice (*Oryza sativa* L.). MS Thesis, Jahangir Nagor University, Savar, Dhaka, Bangladesh
- Md. Mozahidul haque (ongoing). Marker Assisted Selection for Cold Tolerance at Seedling Stage in Rice (*Oryza sativa* L.). MS Thesis. Sher-e-Bangla Agricultural Univerisity, Sher-e-Bangla Nagar, Dhaka-1207, Bangladesh
- Md. Mahathir Sarker (ongoing). Marker Assisted Introgression of Seedling Stage Cold Tolerance into BRRI dhan28. MS Thesis. Bangabandhu Sheikh Mujibur Rahman Agricultural University, Gazipur-1706, Bangladesh

THESIS EXAMINED AND ACTED AS EXAMINATION COMMITTEE MEMBERS

- Rozina Akter, 2015. Evaluation of Tomato (*Solanum lycopersicum* L.) Genotypes on Agromorphogenic, physiological, Antioxidant and Nutritional Traits under Drought. MS Thesis, Sher-e-Bangla Agricultural Univerisity, Sher-e-Bangla Nagar, Dhaka-1207, Bangladesh
- Sazia-E-Jannat, 2015. Evaluation of New Plant Type Advanced Lines of Rice for Aman Season as High Yielding Varieties. MS Thesis, Sher-e-Bangla Agricultural Univerisity, Sher-e-Bangla Nagar, Dhaka-1207, Bangladesh
- Kamrul Islam, 2015. Variability and Interrelationship in Traits of F4 Population of Rice (Oryza sativa L.) Leading to Selection of high Yielding Boro Lines. MS Thesis, Sher-e-Bangla Agricultural Univerisity, Sher-e-Bangla Nagar, Dhaka-1207, Bangladesh
- Ruhul Amin, 2015. Genetic and Morphological Diversity of Natural Population of Chilli (*Capsicum spp.*). MS Thesis, Sher-e-Bangla Agricultural Univerisity, Sher-e-Bangla Nagar, Dhaka-1207, Bangladesh

- Tasnia Taiana, 2015. Variability, Correlation, Path Coefficient and Diversity Analysis in Tomato (*Solanum lycopersicum* L.). MS Thesis, Sher-e-Bangla Agricultural Univerisity, Sher-e-Bangla Nagar, Dhaka-1207, Bangladesh
- Abu Bakar Siddique, 2019. Genotype – Stress interaction under Salinity and drought condition in tomato (Solanum lycopersicum L.), MS Thesis, Sher-e-Bangla Agricultural Univerisity, Sher-e-Bangla Nagar, Dhaka-1207, Bangladesh

REVIEWER OF JOURNAL AND PROJECT PROPOSAL

Reviewer of 1. Rice Journal 2. Bangladesh Journal Progressive Science and Technology 3. Bangladesh Journal of Plant Breeding and Genetics 4. Bangladesh Annals of Agriculture 5. 3 Biotech (IF 2.45) 6. Plant Science (Elsevier Journal, IF: 3.71) 7. Crop Breeding, Genetics and Genomic (Hapres – An Academic Publisher) 8. Breeding Science (IF1.743) 9. Frontier in Genetics (IF: 3.517) 10. Journal of Advance Research (Elsevier Journal, IF5.045) 11. Scientific Report (IF3.998) 12. Frontier in Plant Science (IF6.627) 13. Euphytica 14. BMC Genomics 15. Discover Plants 16. Rice	Reviewed more than 50 manuscript of full length research Articles

AWARDS/ GRANTS/ SCHOLARSHIP

1. 2021: Recognition Certificate for continuous efforts in the research and development for breeding rice under pandemic COVID19 along with other colleague
2. 2019: TRB Project Annual Award 2019, BRRI-BMGF-IRRI TRB Project, BRRI, Gazipur
3. 2017: Bangabandhu Agricultural Plaque along with other colleague in Plant Breeding Division.
4. 2016: Plant Breeding Award for Young Scientist 2016, Plant Breeding and Genetics Society of Bangladesh
5. 2015: BRRI Award 2015 As the best scientist of the year, BRRI Gazipur
6. 2008: ALUF-GCGH SCHOLARSHIP/Grants of University of Freiburg, Germany for PhD thesis Research at IRRI

7. 1998: Distinction in the Rice Production, Communication and Office Management Training, BRRI Gazipur

DONOR FUNDED RESEARCH PROJECTS SUPERVISED

- Principal Investigator of the project 'Food for Progress: Development of Arsenic tolerant rice in Bangladesh' funded by USDA-Cornell University from October 1, 2011 to May 31, 2014.
- Principal Investigator of the project 'Zinc Rice Bangladesh NARS Partnerships' funder by HarvestPlus-IRRI from 5 March 2012 to date
- Principal Investigator of the project 'The deployment and validation of high beta-carotene rice varieties in the Philippines and Bangladesh to combat Vitamin A deficiency' funded by BMGF-IRRI from 5 March 2012 to date
- Principal Investigator of the project ' Development of Research Capacity of Bangladesh Rice Research Institute' funded by KOICA, The Republic of Korea from 2012 – 2013
- Principal Investigator of the project ' Development of cold tolerant and Micronutrient Enriched Rice' funded by GAFSP-World Bank from January 2013 – June 2016
- Co-investigator of the project Validation and delivery of the Technologies in the Farmers Field funded by IFAD thru IRRI from 2000-2003.
- Co-investigator of the project 'Participatory Variety Selection Intervention in Sunamganj for Irrigated Boro Rice' under BRRI – Inter-cooperation Collaboration funded Swiss Development and Cooperation (SDC) from 2004 -2006.
- Co-investigator of the project ' Arsenic Tolerant Rice variety Development in Bangladesh' funded by IRRI from 2006-2007

PARTICIPATION IN TECHNOLOGY TRANSFER SYSTEMS

- Worked as principal investigator for advanced yield trials for cold tolerant rice in haor areas of Kisoreganj, Habiganj and Sunamganj during 2019 – to date.
- Worked as principal investigator for the participatory variety selection for cold tolerant rice in Rangpur region under WB-BRRI IAPP project during 2013-2015
- Worked as principal investigator for the participatory variety selection for short duration boro rice in the haor areas of Sunamganj under SDC-IC-BRRI collaboration during 2004-2007
- Worked as principal investigator for the participatory variety selection for shallow flooded deepwater rice during 1999-2001
- Participated in Seed production and Demonstration Program (SPDP) of BRRI dhan31 and BRRI dhan32 as working scientist held at different locations of Jhalakathi district in 1999.
- Participated in the Agriculture fair and seed fair under different nation programs

MONITORING AND EVALUATION

- Participated as a member of the monitoring team formed for inspecting spikelet sterility in Boro rice in Haor areas of Baniachong Upzila Habiganj during May 2019
- Participated as a member of the field monitoring team for the investigation of irregular in BRRI dhan64 in Chalan bill area of Natore during 2016
- Participated as a member of the field monitoring team for the investigation of spikelet sterility in BRRI dhan62 in Mymensigh regions during 2015
- Participated as a BRRI representative in the evaluation committee for pilot production plot of BRRI developed two rice hybrids (IR68877H and IR69690H) during 1999.

SPECIAL PROJECT PREPARATION

- Actively participated in the preparation of IRRI-BRRI-KGF-Haor Project "Development of Short Duration Cold Tolerant Rice Varieties for Haor Areas of Bangladesh
- Actively participated in the preparation of TRB-BRRI Phase II Project proposal
- Actively participated in the preparation IRRI-BRRI project proposal for the development and deployment of provitamin A enriched rice (Golden rice)in Bangladesh)
- Actively participated in the preparation research project proposal for contained and confined field trials of provitamin A enriched rice (Golden rice).
- Actively participated in the preparation of BRRI-IC collaborative research project 'Participatory variety selection (PVS) intervention in haor areas of Sunamganj.
- Actively participated in the preparation of BRRI-IRRI collaborative research project ' Development of Rice with elevated Iron and Zinc: Phase -1-Understand and Exploit GXE Interaction for High Iron and Zinc in the Polished Grain
- Actively participated in the preparation of BRRI-KOICA collaborative research project: Development of research capacity of Bangladesh Rice Research Institute

MANAGEMENT OF RESEARCH PROGRAM/STATION/DIVISION

- Served at BRRI RS Bhanga as Head In charge in 7 September 2014 - 02February 2015
- Actively participated in different office and research management activities assigned by the head of the division
- Worked as a Project leader in Breeding for super high yielding rice varieties since 2003
- Working as project leader for standard boro, cold tolerance, arsenic tolerance rice breeding program since 2011
- Working as deputy project manager (DPM) of IAPP project (BRRI part) for the improvement of livelihood of poor people of Rangpur and Barisal regions
- Principal Investigator of the project 'Food for Progress: Development of Arsenic tolerant rice in Bangladesh' funded by USDA-Cornell University from October 1, 2011 to May 31, 2014.
- Worked as the principal Investigator of the project 'Zinc Rice Bangladesh NARS Partnerships' funder by HarvestPlusIRRI
- Worked as the principal Investigator of the project 'The deployment and validation of high beta-carotene rice varieties in the Philippines and Bangladesh to combat Vitamin A deficiency' funded by BMGF-IRRI

- Worked as the principal Investigator of the project 'Development of Research Capacity of Bangladesh Rice Research Institute' funded by KOICA, The Republic of Korea from 2012 – 2013
- Worked as the principal Investigator of the project ' Development of cold tolerant and Micronutrient Enriched Rice' funded by GAFSP-World Bank from January 2013 – June 2016
- Worked as the co-investigator of the project Validation and delivery of the Technologies in the Farmers Field funded by IFAD thru IRRI from 2000-2003.
- Worked as the co-investigator of the project 'Participatory Variety Selection Intervention in Sunamganj for Irrigated Boro Rice' under BRRI – Inter-cooperation Collaboration funded Swiss Development and Cooperation (SDC) from 2004 -2006.
- Worked as the co-investigator of the project ' Arsenic Tolerant Rice variety Development in Bangladesh' funded by IRRI from 2006-2007

RESOURCE PERSON IN TRAINING PROGRAMME AND SEMINAR

- Resource speaker of Sunday seminar at BRRI on Bio-safety issues of transgenic crops, March 2020
- Resource speaker of Scientific report writing held on 18-22 October 2020 at BRRI Gazipur
- Resource speaker of Thursday seminar at BRRI on Breeding Strategies for Accelerated Genetic Gain in Irrigated Rice, June 2019
- Presented a paper on Strategies for increasing Aus rice cultivation
- Presented research progress and program of BRRI on Rice Breeding activities in the Annual Research Review Workshop on crop improvement program of NARS Institute : Research Progress 2018-19 and research program 2019-20 held on 22-23 September 2019 at BARC, Dhaka
- Resource Speaker in the workshop on "Knowledge Sharing and Capacity Building on Applications Agribiotechnology for Nutrition and Food Security in Bangladesh" organized by Farming Future of Bangladesh and Cornell Alliance for Science on September 22, 2019.
- Resource speaker in the training course for BRRI Scientific Officers on Basic Molecular Biology and Disease resistance held on 23-28 March 2019 at BRRI Gazipur
- Resource speaker in the training courses for UAO/BS held at BRRI Gazipur as a trainer
- Resource speaker in the molecular rice breeding training program for scientist of BRRI under NATP
- Resources speaker in the Experimental Design for Rice Breeding course for Vietnam's scientists at Field Crop Research Institute at Hai Duong, Vietnam in 2018
- Resources speaker in the Molecular Breeding Courses for African scientists at IRRI, Los Banos in 2018
- Resource person for Molecular Breeding course in 2014 at BRRI Gazipur, Bangladesh
- Resource person for Molecular Breeding course in 2015 at BARI Gazipur, Bangladesh
- Resource person for Biosafety Measures in Transgenic Crops in 2015 at Bangladesh Agricultural Research Council, Dhaka, Bangladesh
- Resource person for Biosafety Measures for Field and Laboratory experiment with GE Plants in 2015 at Cotton Development Board, Dhaka, Bangladesh
- Resource person for Rice Production course at BRRI, Gazipur, Bangladesh

PROFESSIONAL ASSOCIATION

- IRRI Alumni
- Former General Secretary, AFSTRI, IRRI (2010)
- Life member, Bangladesh Plant Breeding and Genetics Society
- Life member, Bangladesh Association of Advanced Science
- Life Member, Krishibid (Agriculturist) Institution of Bangladesh
- Life Member, Korea-Bangladesh Alumni Association

ATTENDED TRAINING COURSES

- Rice production, Communication and Office management - 18 October – 15 December 1998, BRRI, Gazipur
- Project Development Management, 08-12 April 2012, BARC, Dhaka
- Bioinformatics for Sustainable Development in Agriculture, 19-21 March 2019, BARC, Dhaka
- Molecular Biology Application in Plant Breeding, 8 June – 03 July 2014, BRRI, Gazipur
- Public Procurement Management, 02-07 March 2019, BIM, Dhaka
- Application of Bioinformatics in Rice Improvement, 14 - 24 January 2020, BRRI, Gazipur
- Institutional Management, 17- 28 April 2000, AIT, Thailand
- Planning Rice Breeding Program for Impact, 9-27 February 2004, IRRI, Philippines
- Introgression of Beta-Carotene locus (Golden Rice trait) into a popular rice variety of Bangladesh through marker assisted backcrossing, 7 February 2008 – 3 June 2011, IRRI, Philippines
- Bioinformatics Workshop for Crop Research, 24-28 March 2008, IRRI, Philippines
- Introduction to R Course, 28-29 April 2009, IRRI, Philippines
- Basic Experimental Designs and Data Analysis using Crop Stat, 22-26 February 2010, IRRI, Philippines
- Training for Quality Assurance Managers and Trial Managers and Trial Personnel for confined field trials and field testing, 25 June 2010, IRRI, Philippines
- SNP Data Analysis Training Course, 8-11 March 2011, IRRI, Philippines
- Training workshop on Cold tolerant rice breeding and agricultural machineries, 2012, RDA, Korea
- Carotenoid Analysis Training, 18-22 March 2013, Bogor, Indonesia
- Introduction to R and Data Management, Statistical Analysis, GWAS, QTL mapping and RNA sequencing, 17 August – 22 September 2017, IRRI, Philippines
- Statistical Design and Analysis for Plant Breeding using R, 13 – 17 August 2018, IRRI, Philippines

THESIS RESEARCH

- PhD thesis (2012): Introgression of Beta-Carotene locus into a Popular Rice Variety of Bangladesh through Marker Asp'sisted Backcrossing
- MS Thesis (2004): Heterosis and combining ability analysis in rice using cytoplasmic genetic male sterile lines

PUBLICATIONS

Book chapter

1. Mark Ian C. Calayugan, B. P. Mallikarjuna Swamy, Chau Thanh Nha, Alvin D. Palanog, Partha S. Biswas, Gwen Iris Descalsota-Empleo, Yin Myat Myat Min, and Mary Ann Inabangan-Asilo. 2021. Zinc-Biofortifed Rice: A Sustainable FoodBased Product for Fighting Zinc Malnutrition. PP 449-470. J. Ali, S. H. Wani (eds.), **Rice Improvement**, https://doi.org/10.1007/978-3-030-66530-2_13

2. Partha S. Biswas, Md. Mamunur Rashid, Hasina Khatun, Rumena Yasmeen and Jiban Krishna Biswas. 2018. Scope and Progress of Rice Research Harnessing Cold Tolerance. In: MIrza Hasanuzzaman, Masayuki Fujita, Kamrun Nahar and Jiban Krishna Biswas (Eds.). **Advances in Rice Research for Abiotic Stress Tolerance**. WoodHead Publishing, Elsevier. ISBN: 978-0-12-814332-2 (print), ISBN: 978-0-12-814333-9 (online). Pp 225-264.

3. M A Kader, Partha s. Biswas and M A Momin. 2018. **Golden Rice: Frequently Asked Questions**. Bangladesh Rice Research Institute, Gazipur

4. M A Salam, P S Biswas and M. Akhlasur Rahman. 2004. Strategies for increasing the productivity of rice in medium flooded areas of Bangladesh. In: Sadiq I. Bhuiyan, M. Z. Abedin, V. P. Singh and B. Hardy (editors). **Rice Research and Development in the Flood-prone Ecosystem**. Los Banos (Philippines): International Rice Research Institute. 283 p.

Research articles

1. Fahamida Akter, Partha S. Biswas, A.K.M. Aminul Islam, M.S. Raihan, Md. Mizanur Rahman, K. M. Iftekharuddaula, Mohammad Rafiqul Islam, John Damien Platten. 2026. Stage-specific screening reveals differential resilience response to cold stress in rice. PLOS One 21(4). DOI: 10.1371/journal.pone.0338290
2. F Akter, A K M A Islam, M S Raihan, M M Rahman, M A Syed, M Anisuzzaman2, M R Islam, J D Platten and P S Biswas. 2026. Development and Identification ofRecombinant Inbred Lines (RILs) ExhibitingReproductive-stage Cold Tolerance in Rice. Bangladesh Rice J.28(2): 1-23, 2024, doi.org/10.3329/brj.v28i2.87030
3. Partha S. Biswas (Corresponding author), R. Santelices, Rhulyx Mendoza, Vitaliano Lopena, Juan D. Arbelaez,Norvie L. Manigbas, Joshua N. Cobb, Bertrand Collard and Mohammad Rafiqul Islam. 2024. *(PDF) Assessment of Efficiency of Breeding Methods in Accelerating Genetic Gain in Rice*. *Agronomy* **2024**, *14*(3), 566; **https://doi.org/10.3390/agronomy14030566**

4. Tapas Kumer Hore, C. H. Balachiranjeevi, Mary Ann Inabangan-Asilo, C. A. Deepak, Alvin D. Palanog, Jose E. Hernandez, Glenn B. Gregorio, Teresita U. Dalisay, Maria Genaleen Q. Diaz, Roberto Fritsche Neto, Md. Abdul Kader, Partha Sarathi Biswas & B. P. Mallikarjuna Swamy. 2024. Genomic prediction and QTL analysis for grain Zn content and yield in *Aus*-derived rice populations. ***J. Plant Biochem. Biotechnol***. **33**, 216–236 (2024). https://doi.org/10.1007/s13562-024-00886-0
5. Partha S. Biswas (Corresponding Author), R. Santelices, Rhulyx Mendoza, Vitaliano Lopena, Juan D. 2 Arbelaez, Norvie L. Manigbas, Josh N. Cobb, Bertrand Collard and Mohammad R. Islam. 2024. Assessment of efficiency of breeding methods in accelerating genetic gain in rice. **Agronomy** 14:566, https://doi.org/10.3390/agronomy14030566
6. Mohammad Mobarak Hossain, Partha Sarathi Biswas and Rafiqul Islam. 2023. Cold-Tolerant and Short-Duration Rice (Oryza sativa L.) for Sustainable Food Security of the Flash Flood-Prone Haor Wetlands of Bangladesh. **Sustainability**. 15 (24), https://doi.org/10.3390/su152416873
7. M M E Ahmed, P. S. Biswas, Wazifa Afrin, Y Khan, M R A Sarker and K M Iftekharuddaula. 2023. Recent advances in population improvement through RGA under Irrigated Boro rice breeding program in Bangladesh. ***Bangladesh Rice Journal*****,** *26*(1), 33–46. https://doi.org/10.3329/brj.v26i1.66591
8. Md. Abdul Kader, AKM Shalahuddin , Tapas Kumer Hore , Ratna Rani Majumder , SM Tariqul Islam , Md. Ehsanul Haq , Urmi Rani Shaha , Kaniz Fatema , Partha Sarathi Biswas and Khandakar Md. Iftekharuddaula. 2023. BRRI Dhan102: An Irrigated Ecosystem-Friendly Zinc-Enriched Rice Variety for Bangladesh. **Journal of Experimental Agriculture International**. Volume 45, Issue 4, Page 21-27, 2023; Article no.JEAI.97248 ISSN: 2457-0591.
9. Biswas PS (Corresponding author), Ahmed MME, Afrin W, Rahman A, Shalahuddin AKM, Islam R, Akter F, Syed MA, Sarker MRA, Ifterkharuddaula KM and Islam MR (2023) Enhancing genetic gain through the application of genomic selection in developing irrigated rice for the favorable ecosystem in Bangladesh. ***Front. Genet.*** 14:1083221. doi: 10.3389/fgene.2023.1083221 (Impact factor: 4.274)
10. Rahman, M.N.F., Malik, W. A., Kabir, M.S., Baten, M.A., Hossain, M.I., Paul, D.N.R., Ahmed, R., Biswas, P.S., Rahman, M.C., Rahman, M.S., Iftekharuddoula, K.M., Hadasch, S., Schmidt, P., Islam, M.R., Rahman, M.A., Atlin, G.N., Piepho, H.P. 2023. 50 years of rice breeding in Bangladesh: Genetic yield trends. **Theor Appl Genet.** 126, 1-13. DOI: 10.1007/s00122-023-04260-x (Impact Factor 5.699)
11. Hossain, M.; Islam, M.; Biswas, P. Participatory Variety Testing to Replace Old Mega Rice Varieties with Newly Developed Superior Varieties in Bangladesh. ***Int. J. Plant Biol***. 2022, *13*, 356-367. https://doi.org/10.3390/ijpb13030030 (Impact Factor 0.737)
12. Akter, N.; Biswas, P.S.; Syed, M.A.; Ivy, N.A.; Alsuhaibani, A.M.; Gaber, A.; Hossain, A. Phenotypic and Molecular Characterization of Rice Genotypes' Tolerance to Cold Stress at the Seedling Stage. ***Sustainability*** 2022, *14*, 4871. https://doi.org/10.3390/su14094871 (Impact Factor 3.889)
13. Roselyne U. Juma, Jérôme Bartholomé, Parthiban Thathapalli Prakash, Waseem Hussain, John D. Platten, Vitaliano Lopena, Holden Verdeprado, Rosemary Murori, Alexis Ndayiragije, Sanjay Kumar Katiyar, Md Rafiqul Islam, Partha S. Biswas, Jessica E. Rutkoski, Juan D. Arbelaez, Felister N. Mbute, Douglas W. Miano, Joshua N. Cobb. 2021. Identification of an Elite Core Panel as a Key Breeding Resource

to Accelerate the Rate of Genetic Improvement for Irrigated Rice. ***Rice*** 14, 92. https://doi.org/10.1186/s12284-021-00533-5. (Impact Factor 5.638)

14. Partha S. Biswas (Corresponding author), B. P. Mallikarjuna Swamy, Md. Abdul Kader , Md. Alamgir Hossain, Raul Boncodin, Mercy Samia, Md. Lutful Hassan, M. Wazuddin, Donald MacKenzie and Russell Reinke. 2021. Development and Field Evaluation of Near-Isogenic Lines of GR2-EBRRI dhan29 Golden Rice. **Front. Plant Sci**., 25 February 2021 | https://doi.org/10.3389/fpls.2021.619739 (Impact factor: 4.402)
15. B. P. Mallikarjuna Swamy, Severino Marundan Jr., Mercy Samia, Reynante L. , Democrito B. Rebong, Ronalyn Miranda, Anielyn Alibuyog, Anna Theresa Rebong, Ma. Angela Tabil, Roel R. Suralta, Antonio A. Alfonso, Partha Sarathi Biswas, Md. Abdul Kader, Russell F. Reinke, Raul Boncodin & Donald J. MacKenzie. 2021. Development and characterization of GR2E Golden rice introgression lines. **Scientific Reports,** volume 11, Article number: 2496 (2021)
16. Md. Abdul Kader, A. K. M. Shalahuddin , Tapas Kumer Hore , Ratna Rani Majumder , Md. Ehsanul Haq, Kaniz Fatema , Partha Sarathi Biswas and Khandakar Md. Iftekharuddaula. 2021. BRRI Dhan100: A Zinc Enriched Rice Variety Suitable for Irrigated Ecosystem in Bangladesh. **Asian Plant Research Journal**. 8(1): 1-8, 2021; Article no.APRJ.69295. ISSN: 2581- 9992
17. Shaikh J. Mohiuddin , Md. Ashraful Haque , Md. Manjurul Haque , Md. Tofazzal Islam , Partha S. Biswas (Corresponding author). 2020. Genetic Analysis Reveals a Major Effect QTL Associated with High Grain Zinc Content in Rice (Oryza sativa L.). **Plant Breed. Biotech**. 2020 (December) 8(4): 327-340 https://doi.org/10.9787/PBB.2020.8.4.327
18. Md. Abdul Kader, Partha Sarathi Biswas, Tamal Lata Aditya, Mohammad Anisuzzaman, Tapas Kumer Hore and Md. Ehsanul Haq. 2020. Zinc Enriched High Yielding Rice Variety BRRIdhan84 for Dry Season Rice Growing Areas of Bangladesh. **Asian Plant Research Journal**. 6(1): 6-13, 2020; Article no.APRJ.60052, DOI: 10.9734/APRJ/2020/v6i130117
19. P S Biswas, H Khatun and M Anisuzzaman (2020) Molecular and Phenotypic Characterization for Cold Tolerance in Rice (Oryza sativa L.). Bangladesh Rice J. 23 (2): 1-15, 2019, doi.org/10.3329/brj.v23i2.48243
20. Nomita Das, Nazmul Alam, Kamal Hossain and Partha S Biswas (Corresponding author). 2019.Mapping quantitative trait loci for cold tolerance in rice at seedling stage. Bangladesh J. Bot. 48(4): 1021-1028, 2019 (December)
21. Satyen Mondal, Najibul Rehman Sofi, MM Emam Ahmed, Tuhin Halder and Partha S. Biswas (Corresponding author). 2019. Regulatory genes and enzymatic complex of flowering time in rice. **Plant Breed. Biotech**. 2019 (September) 7(3):1~000. https://doi.org/10.9787/PBB.2019.7.3.1
22. Joshua N. Cobb, Roselyne U. Juma, Partha S. Biswas, Juan D. Arbelaez, Jessica Rutkoski, Gary Atlin, Tom Hagen, Michael Quinn, Eng Hwa Ng. 2019. Enhancing the rate of genetic gain in public-sector plant breeding programs: lessons from the breeder's equation. **Theoretical and Applied Genetics**. 132: https://doi.org/10.1007/s00122-019-03317-0
23. Cobb JN, Biswas PS, Platten JD. 2018. Back to the future: revisiting MAS as a tool for modern plant breeding. **Theor Appl Genet**. 2018 Dec 17. doi: 10.1007/s00122-018-3266-4. [Epub ahead of print]

24. Bertrand C. Y. Collard, Joseph C. Beredo, Bert Lenaerts, Rhulyx Mendoza, Ronald Santelices, Vitaliano Lopena, Holden Verdeprado, Chitra Raghavan, Glenn B. Gregorio, Leigh Vial, Matty Demont, Partha S. Biswas, Khandakar M. Iftekharuddaula, Mohammad Akhlasur Rahman, Joshua N. Cobb and Mohammad Rafiqul Islam.2017.Revisiting rice breeding methods – evaluating the use of rapid generation advance (RGA) for routine rice breeding. **Plant Production Science**. ISSN: 1343-943X (Print) 1349-1008 (Online) DOI: 10.1080/1343943X.2017.1391705

25. M.A. Syed, K.M. Iftehkaruddaula, N. Akter and P.S. Biswas. 2019. Molecular Diversity Analysis of Some Selected BBRI Released Rice Varieties using SSR Markers. International Research Journal of Biological Sciences. pISSN: 2663-5968, eISSN: 2663-5976

26. Syed MA, Iftekharuddaula KM, Rasul GM, Rahman GKMM, Panaullah GM, Duxbury JM, Hossain M, Biswas PS. 2019. Development and standardization of a simple and quick screening protocol for arsenic phyto-toxicity tolerance in rice. **Food Sci. Tech**. 7(3):31-40. (Impact factor: 1.85)

27. Syed MA, Iftekharuddaula KM, Akter N, Biswas PS, Hossain M. 2019. Assessment of genetic diversity in arsenic contaminated rice using SSR markers. **Treds Appl. Sci. Res**. 14(3): 1078-185. (RG Impact factor: 0.23)

28. Partha S Biswas (Corresponding author), Hasina Khatun, Nomita Das, Md Mahathir Sarker and M Anisuzzaman. 2017. Mapping and validation of QTLs for cold tolerance at seedling stage in rice from an indica cultivar Habiganj Biro VI (Hbj.BVI). **3 Biotech**, 7: 1-12 DOI 10.1007/s13205 -017-0993-1

29. Nomita Das and Partha S. Biswas (Corresponding author). 2017. Molecular characterization of parental lines of rice aiming to address high yield and nutritional quality under drought and cold stress condition. Current Res Agril Sci. 4: 51-60

30. Hasina Khatun, Partha S Biswas(Corresponding author), Hung Goo Hwang, Kyung-Min Kim. 2016. A Quick and Simple In-house Screening Protocol for Cold-Tolerance at Seedling Stage in Rice. **Plant Breed. Biotech**. 2016 4:373-378. http://dx.doi.org/10.9787/PBB.2016.4.3.373

31. Md. Abu Syed , K. M. Iftekharuddaula, M. A. Khaleque Mian, Md. Golam Rasul, G. K. M. Mustafizur Rahmam, Golam M. Panaullah, Julie G. Lauren, John M. Duxbury and Partha S. Biswas (Corresponding author). 2016. Main effect QTLs associated with arsenic phyto-toxicity tolerance at seedling stage in rice (*Oryza sativa* L.). **Euphytica**. DOI 10.1007/s10681-016-1683-5

32. M Anisuzzaman, Md Maksudul Haque, M M Emam Ahmed, Partha S. Biswas and Md Ansar Ali. 2017. Multi-environment variety testing for irrigated ecosystem in rice (*Oryza sativa* L.). Intl. J Sus Agril Res 4: 9-19.

33. MR Islam, M Anisuzzaman, H Khatun, N Sharma, MZ Islam, A Akter and Partha S. Biswas. 2014. AMMI analysis of yield performance and stability of rice genotypes across different haor areas. Eco-friendly Agril. J. 7(02): 20-24

34. M Khatun, P. S. Biswas, M. A. Hossain, M. K. Hossain and H. Begum. 2010. Genetic Variability, character Association and Coefficient analysis of rice genotypes. Intl. J. BioRes. 9 (3): 36-40.

35. P S Biswas, M J Hassan and A W Julfiquar. 2008. Combining ability and heterosis in panicle traits of rice hybrids involving cytoplasmic male sterility system. Bangladesh J. Pl. Breed. Genet. 21(2):21-26.

36. P S Biswas, M K Hossain, M A Hossain and M A Salam. 2008. Genetic behaviour of grain Fe and Zn content in rice. Intl. J. BioRes., 4 (1): 43-46.

37. P S Biswas and M Enamul Haque. 2007. Gene action of some agronomic traits in rice (*Oriza sativa* L). Bangladesh J. Pl. Breed. Genet. 20 (2): 31-36.

38. P S Biswas, A W Julfiquar and M Wazuddin. 2007. Combing Ability of CMS and Restorers in Rice (*O. sativa* L.). Bangladesh J.Pl. Breed. Genet.20 (1):13-18.

39. P S Biswas, Umakanta Sarker, M A R Bhuiyan and S Khatun. 2006. Genetic divergence in cold tolerant irrigated rice. The Agriculturist, 4(1&2):15-20.

40. P S Biswas, A W Julfiquar and M Wazuddin. 2007. Heterosis in relation to genetic basis of physiological traits in rice (*O. sativa* L.) involving CMS system. Bangladesh J. Agric. 32 (2): 29-39.

41. P S Biswas and M Enamul Haque. 2007. Combining Ability and Heterosis in Indica Rice. Bangladesh Rice J. 12(1&2):99-104.

42. P S Biswas and A W Julfiquar. 2006. Heterosis in relation to combining ability in rice involving cytoplasmic genetic male sterility system. SAARC Jn. of Agri., 4: 33-43

43. P. S. Biswas, M.A. Salam, M.A. Rahman, B. Prasad and B.K.Sarker. 2001. Improved deepwater rice (*Oyza sativa* L) genotypes for shallow flooding. Bangladesh J. Pl. Breed. Genet. 14(1):37-41.

44. P. S. Biswas, Bishwajit Prasad and S.B.A Dewan.2000. Variabilty, and character association and path coefficient analysis in rice (*Oryza sativa* L). Bangladesh J. Pl. Breed. Genet. 13(1):14-25.

45. P. S. Biswas, B. Prasad and M.S. Hossain. 1999. Yield stability of some rice genotypes. Journal of Agricultural Education and Technology.2 (1): 37-40.

46. S Khatun, P S Biswas, M A Rahman, M R Islam and M A Salam. 2008. BRRI dhan42 and BRRI dhan43: two upland rice varieties for drought prone environment. Intl. J. BioRes. 4(5): 48-51.

47. K M Iftekharuddaula, M A Newaz, P S Biswas and M K Bashar. 2008. Genetic components of grain characters in rice (*Oyza sativa* L.). Bangladesh J. Pl. Breed. Genet. 21(1):36-41.

48. M H Kabir, M. Hoque, M. H. S. Hawlader, P. S. Biswas and B. K. Sarker.2007. Farmers participatory deepwater rice development. Bangladesh Rice Journal. 12(1&2): 75-78.

49. M.R. Islam, M.A. Salam, M.A.R. Bhuiyan and P S Biswas. 2006. Combining ability analysis in fine grain rice. Bangladesh J.Pl. Breed. Genet.19 (2): 49-52.

50. M.R.Islam, M.A.B.Faruquei, M.A.R. Bhuiyan, P.S. Biswas and M.A.Salam.2004. Genetic Diversity in Irrigated Rice. Pakistan J. Bio.Sci. 7(2):226-29.

51. A.S.M. Masuduzzaman, P.K.Saha Ray, B. Prasad, P.S. Biswas and M.A.Khaleque Mian. 2003. Evaluation of tolerance to salinity in rice. Bangladesh J.Pl. Breed. Genet.16(1):45-52.

52. Umakanta Sarker, P.S.Biswas, B. Prasad and M. A. Khaleque Mian.2002. Heterosis and genetic analysis in rice hybrids. Pakistan J. Bio. Sci. 5(1):1-5.
53. K Akter, M.S. Ahmed, M.K. Bashar, P.S.Biswas and K.M. Iftekharuddaula. 2007. Genetic diversity in Irrigated Rice. Bangladesh Rice J. 12 (1& 2): 79-83.
54. Umakanta Saker, P.S. Biswas, B. Prasad and M. A. Khaleque Mian.2001. Correlated response, relative selection efficiency and path analysis in cold tolerant rice. Bangladesh J, Plant Breed. Genet. 14(2):33-36.
55. B. Prasad, P.S.Biswas and M. M. Haque. 2001. Genotype-environment interaction in irrigated rice (*Oryza sativa* L). Online J. Bio.Sci.1 (7):571-572.
56. B Prasad, P.S.Biswas and A.K.Patwary. 2001. Genetic variability and selection criteria in fine rice. Pakistan J.Bio.Sci. 4 (10):1188-90.

Abstract/proceedings

57. M Anisuzzaman, **P S Biswas**, H Khatun and H U Ahmed. 2015. BRRI dhan68: A rice variety for favorable boro environment. In M A Saleque, M A Kashem, M A Ali and M S Kabir. 2015. Bangladesh rice research abstract 2014. Bangladesh Rice Research Institute, Gazipur 1701, Bangladesh

58. H Khatun and **P S Biswas**. 2015. BR18 and Hbj. B.VI: Potential indica donors for QTLs/genes conferring seedling stage cold tolerance in rice. In M A Saleque, M A Kashem, M A Ali and M S Kabir. 2015. Bangladesh rice research abstract 2014. Bangladesh Rice Research Institute, Gazipur 1701, Bangladesh

59. P S Biswas, M Anisuzzaman, M A Syed, A Islam, M S Kabir, G M Panaulla, J Laurence and J M Duxbury. BRRI dhan47: A potential donor for arsenic phytotoxicity tolerance in rice. In M A Saleque, M A Kashem, M A Ali and M S Kabir. 2015. Bangladesh rice research abstract 2014. Bangladesh Rice Research Institute, Gazipur 1701, Bangladesh

60. P S Biswas and M M Haque. 2015. Confined field trial of provitamin A enriched Golden Rice event GR2-R introgressed lines of BRRI dhan29. In M A Saleque, M A Kashem, M A Ali and M S Kabir. 2015. Bangladesh rice research abstract 2014. Bangladesh Rice Research Institute, Gazipur 1701, Bangladesh

61. P S Biswas and M A Hossain. 2015. BRRI dhan62 and BRRIdhan64: Potential food based alternatives for alleviation zinc deficiency. In M A Saleque, M A Kashem, M A Ali and M S Kabir. 2015. Bangladesh rice research abstract 2014. Bangladesh Rice Research Institute, Gazipur 1701, Bangladesh

62. M A Syed, K M Iftekharuddaula, **P S Biswas**, and M M Rahman. 2015. Genetic diversity of some BBRI developed rice varieties using SSR markers. In M A Saleque, M A Kashem, M A Ali and M S Kabir. 2015. Bangladesh rice research abstract 2014. Bangladesh Rice Research Institute, Gazipur 1701, Bangladesh

63. M M Hossain , M S Islam and **P S Biswas**. 2015. Reaction of Pro-vitamin A enriched Golden Ricė event GR2-R introgressed lines of BRRI dhan29 to different insect pests under confined field trial conditions. In M A Saleque, M A Kashem, M A Ali and M S Kabir. 2015. Bangladesh rice research abstract 2014. Bangladesh Rice Research Institute, Gazipur 1701, Bangladesh

64. M. S. Kabir, S. Akter, **P. S. Biswas**, M. A. Latif and M. A. Hossain. 2007. Screening, phenotypic and physiological structures of *Xanthomonas oryzae* pv*. oryzae* and its races in Bangladesh. Paper presented in the 2nd International Conference on Bacterial Blight of Rice, held on 1 Oct.- 03 Oct. 2007 in Nanjing, China.

65. **P S Biswas,** M A Salam, K M Iftekharuddaula and A K G Enamul Hahque. 2007. BRRI dhan45: A potential short duration Boro rice variety for escaping flash flood in haor areas of Bangladesh. In: Souvenir of 7th Annual conference of Plant Breeding and Genetic Society of Bangladesh. May 26, 2006. p62.

66. **P. S. Biswas**, A. Hossain, Thanda Tin, M. Inabangan, A. Evangelista, A. Das Padalkar, M. Joseph, J. Macabenta, V. Aldemita, V. Lacorte, L. Torrizo, M. Samia, J. Tan, R. Boncodin, T. S. Bharaj, G. Barry, P. Virk. 2010. Enhancement of nutritional value of indica rice by introgressing beta carotene gene. In. Proc. of 40th CSSP: Scientific Conference on Harnessing Genetic and Ecosystem Diversity for Sustainable Agriculture. Davao city, Philippines, March 15-20, 2010. The Phil. J. Crop Sci. 35(S1): 97.

67. **P S Biswas** A. Hossain, Thanda Tin, M. Inabangan, A. Evangelista, A. Das Padalkar, M. Joseph, J. Macabenta, V. Aldemita, V. Lacorte, L. Torrizo, M. Samia, J. Tan, R. Boncodin, G. Barry, P. Virk. 2010. Enhancing the nutritional value of indica rice varieties by introgressing beta carotene (golden rice) gene. A poster presented in the 6th International Rice genetics Symposium. 16-19 November 2009, Manila, Philippines.

68. **PS Biswas,** Juan David and Joshua N Cobb. **2018.** Precision Phenotyping in Breeding trials. A paper presented in the IRC2018, Singapore

69. Partha Sarathi Biswas, Md Emam Ahmed, Wazifa Afrin, Md Anisuzaman, K M Iftekharuddaula. 2023. Enhancing genetic gain in yield of favorable and cold tolerant Boro rice in Bangladesh through transformation in breeding strategies. A paper presented in the International Rice Congress held on 16-19 October 2023, Manila, Philippines

70. Mohammad Mobarak Hossain, Rafiqul Islam, Partha Biswas, Abu Syed, Mohammad Anisuzzaman, Emam Ahmed and Jiban Biswas. 2023. BR11894–R–R–R–R–169: A cold-tolerant breeding line for dry season to mitigate the early flash flood damage in the haor areas of Bangladesh. A paper presented in the International Rice Congress held on 16-19 October 2023, Manila, Philippines.

Referees:

1. Dr. M A Salam
   Chief Plant Breeder
   ACI Bangladesh
   Phone: +880 1711595577
   Email: masalam_brri@yahoo.com

2. Dr. Md Khairul Bashar
   Country Manager
   HarvestPlus Bangladesh, IBO, Dhaka
   Phone: +880 1711283982
   Email: k.bashar@cgiar.org

3. Dr. Lutful Hassan
   Professor
   Department of Genetics and Plant Breeding
   Bangladesh Agricultural University, Mymensingh, Bangladesh
   Phone: +880 1715091096
   Email: lutfulhassan@yahoo.co.uk

4. Dr. Mohammad Rafiqul Islam
   Scientist II –Plant Breeding
   International Rice Research Institute
   Bangladesh Office
   Banani, Dhaka, Bangladesh
   Email: mr.islam@irri.org

(Partha Sarathi Biswas)