

Curriculum Vitae

Specialization: Plant Breeding, Genetics



1. Name: **Dr. MD. RUHUL AMIN SARKER**

2. Field of Specialization: Plant Breeding, Molecular Breeding (QTL mapping, QTL pyramiding and Marker-Assisted Backcrossing), Genetics, Varietal Development, Molecular Marker Application (SNPs and SSRs), Physiology of Abiotic Stresses and Farmer Participatory Approach

3. Father's name: Md. Abdul Quddus Sarker

Mother's name: Mrs. Rowsan Ara Begum

4. Address:

Permanent: Village- Sreekhandi, P.O.- Marirhat

Upazilla- Palashbari, District- Gaibandha

Present: Senior Scientific Officer

Plant Breeding Division, Bangladesh Rice Research Institute

Gazipur-1701, Bangladesh

E-mail: mrasbri@yahoo.com

Mobile: +88-02-01712674693

5. Date of birth: 1st December, 1974

6. Nationality: Bangladeshi by birth

7. Religion: Muslim (Sunni)

8. Marital status: Married

9. Educational Qualification

Name of degree obtained	Name of Institution	Period of Enrollment	Division/ Class obtained	Year of passing
PhD in Genetics and Plant Breeding	Bangladesh Agricultural University, Mymensingh (Research conducted at IRRI, Philippines 2009-2012)	2009-2013	Successfully completed	2013
MS in Genetics and Plant Breeding	Bangladesh Agricultural University, Mymensingh	2000-2001	First class	2001
B.Sc. in Agriculture	Bangladesh Agricultural University, Mymensingh	1991-1995	First class	1995 (Exam. held in 1999)

10. Dissertations

PhD: Identification of novel QTLs associated with salinity tolerance in rice and introgression of *Saltol* into a popular variety through marker assisted backcrossing

MS: Genetic analysis of seed yield in F₂ diallel population of dry bean

11. Training obtained

a) National

Title	Location	Year	Duration	
			Month	Days
Breeder Seed Production	BRRI, Gazipur	2001		05
Hybrid Rice Seed Production	BRRI, Gazipur	2003		02
Foundation Training Course for NARS Scientists (Batch-12)	BARD, Comilla	2005	04	
Conservation and Utilization of Plant Genetic Resources	BARI, Gazipur	2007		04
Rice Production Training Course	BRRI, Gazipur	2008	02	
GCP Training Workshop on Marker Assisted Breeding for Bangladesh	BRRI, Gazipur	2008		10
Training Workshop on Research Proposal Preparation and Scientific Report Writing	BARC-CMD, Gazipur	2013		05
Molecular Biology Application in Plant Breeding	BRRI, Gazipur	2014		26
Design and Analysis of Breeding Trials using Plant Breeding Tools (PBTools)	BRRI, Gazipur	2017		04
Modern Rice Production Training Course	BRRI, Gazipur	2017		03
Experimental Design and Data Analysis Training Course	BRRI, Gazipur	2017		03
Breeding for Results (B4R)	BRRI, Gazipur	2018		03
Mutation Breeding of Field and Horticultural Crops	BINA, Mymensingh	2019		02
Agricultural Research Methodology Training Course	BRRI, Gazipur	2019		05
Rice Physiological Development through Trait Discovery Training Course	BRRI, Gazipur	2020		05
Application of Bioinformatics in Rice Improvement	BRRI, Gazipur	2020		10

b) International

Title	Location	Year	Duration	
			Month	days
Rice Breeding Course: Laying the Foundation for the Second Green Revolution	IRRI, Philippines	2007		12
Scientific Writing Workshop	IRRI, Philippines	2009		06
Basic Bioinformatics Course	IRRI, Philippines	2009		02
SNP Data Analysis Training Course	IRRI, Philippines	2011		03
Breeding for Rice (B4R) on-line data management system	IRRI, Philippines	2017	03	
AGGRi Breeding4Results Training	IRRI, Philippines	2019		12

12. Research experience

i) **2001-2004:** As Scientific Officer (Poverty Alleviation Through Rice Research Assistance-PETTRA Project) in the Genetic Resources and Seed Division (GRSD), Bangladesh Rice Research Institute (BRRI), Gazipur and worked on Breeder seed production and Distribution, Planning, designing and execution of research program on rice breeding and managing of rice germplasm.

ii) **2004-2009:** As Scientific Officer in the Plant Breeding Division, BRRI, Gazipur and worked under Varietal Improvement Program for the development of rice varieties for Tidal Wetlands, Flash Flood Submergence Tolerance, Insect Resistance, Water saving Rice technologies and Aerobic rice. Planning, designing and execution of research program on rice breeding i.e. hybridization, selection of segregating breeding materials, pedigree management. Evaluation of yield trials (OT, PYT, SYT, RYT/MLT), collaborative research with IRRI through International Network for Genetic evaluation of Rice (INGER) and report writing. Participatory variety selection (PVS) intervention for irrigated rice in haor areas of Bangladesh.

iii) **2009-2012:** As PhD Research scholar at IRRI, Philippines and Research focused on (a) Identification of novel QTLs associated with salinity tolerance at seedling stage using Chikiram Patnai/Azucena cross, (b) Confirmation of one major QTL other than *Saltol* using FL478/IR29 NILs and (c) Introgression of *Saltol* QTL into BRRI dhan29 through marker-assisted backcrossing. Confirmation of the introgressed *Saltol* lines are being tested under field condition of Bangladesh.

iv) **2012-2015:** Served as Senior Scientific Officer in the Plant Breeding Division, BRRI, Gazipur and worked as Program Leader for the Development of salt tolerant variety, upland *Aus* rice, Pyramiding of *Saltol* and *Sub1* loci into BRRI dhan49 through marker-assisted selection; conducted PVS for coastal saline environment, Insect Resistance Breeding and collaborative research (STRASA, CPWF & CURE) with IRRI. Hybridization, handling and selection of segregating breeding population and pedigree. Evaluation of yield trials (OT, PYT, SYT, RYT/MLT), collaborative research with IRRI through INGER and report writing.

v) **2015-2017:** As Senior Scientific Officer at BRRI Regional Station, Rangpur in the Plant Breeding Division and involving in Planning, designing, implementation and monitoring of research program on rice breeding (Flash Flood Submergence, Cold and Drought Tolerance), managing segregating population and pedigree, evaluation of yield & adaptive trials, breeder seed production, developing local problem based program and report writing. Conducting PVS for Flash Flood Submergence tolerance. Dissemination of technology (Extension activities) and training of farmers and extension staffs, office management, collaborative work with IRRI (Transforming Rice Breeding-TRB-BRRI Project), NGOs and site visit with International and national scientists.

vi) **2018 to date:** As Senior Scientific Officer in the Plant Breeding Division, BRRI, Gazipur and working for the Development of Favorable Boro and Cold Tolerant Rice. Program Leader and PI for the Development of Insect Resistance Rice, DNA marker-assisted breeding for producing highly stress tolerant elite rice varieties for coastal Bangladesh by introgression of multiple salt tolerance loci (QTLs) into commercial cultivars. Hybridization, handling and selection of segregating breeding population.

Evaluation of yield trials (OYT, PYT, AYT, RYT/MLT), collaborative research with IRRI through INGER and report writing.

13. Salient Research accomplishments (in brief):

Sl#	Developed technologies	Type of technology	Working as	Year of release
1.	BRRRI dhan47	Salt tolerant Boro rice variety	Co-investigator	2007
2.	BRRRI dhan48	Transplanted Aus rice variety	Co-investigator	2008
3.	BRRRI dhan61	Salt tolerant Boro rice variety	Co-investigator	2013
4.	BRRRI dhan65	Broadcast Aus rice variety	Principal Investigator	2014
5.	BRRRI dhan67	Salt tolerant Boro rice variety	Principal Investigator	2014
6.	BRRRI dhan72	Zn enriched T. Aman Rice variety	Co-investigator	2015
7.	BRRRI dhan73	Salt tolerant T. Aman rice variety	Principal Investigator	2015
8.	BRRRI dhan75	Short duration T. Aman Rice variety	Co-investigator	2016
9.	BRRRI dhan78	Tidal Submergence and Saline tolerant T. Aman rice variety	Co-investigator	2016
10.	BRRRI dhan79	Flash flood submergence tolerant T. Aman rice variety	Co-investigator	2017
11.	BRRRI dhan80	Premium Quality T. Aman Rice variety	Co-investigator	2017
12.	BRRRI dhan81	Short duration Boro rice variety	Co-investigator	2017
13.	BRRRI dhan82	Transplanted Aus rice variety	Co-investigator	2017
14.	BRRRI dhan84	Zn enriched Boro Rice variety	Co-investigator	2017
15.	BRRRI dhan88	Short duration Boro rice variety	Co-investigator	2019
16.	BRRRI dhan29- <i>Saltol</i>	Salt tolerant Boro rice lines	Principal Investigator	MABC product
17.	BRRRI dhan49- <i>Saltol</i>	Salt tolerant T. Aman rice lines	Principal Investigator	MABC product
18.	BRRRI dhan63, BRRRI dhan67 and BRRRI dhan74 multiple salt tolerant QTLs (RL, K ⁺ and <i>Saltol</i>) lines	Salt tolerant Boro rice lines	Principal Investigator	MABC product

Handling of the project

R & D project (s) pursued as PI/Co-PI

Principal Investigator

1. Stress tolerant rice for poor farmers in Africa and South-Asia (STRASA-Salinity)
2. G2: Productive, profitable and resilient agriculture and aquaculture systems (CPWF)
3. Site Coordinator: Consortium for Unfavorable Rice Environments (CURE-Breeding Salinity)
4. Pyramiding salinity and submergence tolerance genes into BRRRI dhan49 through marker-assisted selection (NATP-1)

5. Asian Food and Agriculture Cooperation Initiative (AFACI Food Security Project-Salinity) Funded by South Korea
6. Integrated Agricultural Productivity Project (IAPP-Breeding Salinity)
7. Introgression of multiple salt tolerant QTLs into BRR1 dhan63, BRR1 dhan67 and BRR1 dhan74 through KASP genotyping (NATP-2, Project ID-010)
8. Insect Resistance-TRB BRR1 Project funded by BMGF

14. Publications:

A. Journal paper (Full Paper)

- 1) **Sarker, M. R. A.** and Newaz, M. A. 2004. Combining Ability of Seed Yield and component characters of dry bean. *Progress. Agric.* 15 (1): 247-251.
- 2) **Sarker, M. R. A.**, Newaz, M. A. and Bashar, M. K. 2004. Genetic Analysis of Seed Yield and yield contributing characters of dry bean (*Phaseolus vulgaris L.*). *Bangladesh J. Prog. Sci. and Tech.* 2 (1): 55-58.
- 3) Ahamed, M. S., Bashar, M. K., Khalequzzaman, M., **Sarker, M. R. A.** and Akter, K. 2004. Rice Diversity evaluation through participatory variety selection Southwest Bangladesh. *Bangladesh J. Prog. Sci. and Tech.* 2 (1): 39-42.
- 4) Khalequzzaman, M., Akter, K., Khatun, S., **Sarker, M. R. A.** and Habib, S. H. 2005. Multivariate Analysis on the quantitative characters of rice germplasm collected from Southwest of Bangladesh. *Int. J. Sustain. Agril. Tech.* 1 (3): 10-15.
- 5) Ahamed, H. U., **Sarker, M. R. A.**, Khatun, S. and Salam, M. A. 2008. Identification of genotypes suitable for different ecosystem of Bangladesh. *Intl. J. BioRes* 4(6): 17-21.
- 6) Dewan, M. M. R., Talukder, M. S. A., Hossen, M. A., **Sarker, M. R. A.** and Islam, S. A. 2008. A study on Mustard seed quality in different storage containers. *Eco-friendly Agril. J.* 1(4): 198-201.
- 7) **Sarker, M. R. A.**, Islam, S. A., Mannan. A. M., Dewan, M. M. R. and Hossen, M. A. 2009. Influence of different rates of Nutrients and Planting Density on the Yield of BRR1 dhan44. *Intl. J. BioRes* 6(1): 7-11.
- 8) Sharma, N., **M. R. A. Sarker**, M. A. Rahman and M. R. Islam. 2013. Participatory varietal selection of modern T. Aman rice varieties in salt affected coastal area of Bangladesh. *Eco-frindly Agril. J.* 6(08): 141-145.
- 9) Sharma, N., **M. R. A. Sarker**, M. A. Rahman and M. R. Islam. 2013. Varietal evaluation of rice for improving productivity in southern Bangladesh. *Intl. J. BioRes.* 15(4): 7-13.
- 10) Akter, S., R. Yasmeen, H. U. Ahmed, **M. R. A. Sarker** and M. S Rahman. 2014. Salinity tolerance of some elite rice breeding lines at reproductive stage. *Bangladesh Rice J.* 18 (1 & 2) 35-40.
- 11) Hoque, A. B. M. Z., M. A. Haque, **M. R. A. Sarker** and M A. Rahman. 2015. Marker-assisted introgression of *Saltol* locus into genetic background of BRR1 dhan-49. *Int. J. Biosci.* Vol. 6, No. 12: 71-80.
- 12) Islam. M. R., **M. R. A. Sarker**, N. Sharma, M. A. Rahman, B. C. Y. Collard, G. B. Gregorio, A. M. Ismail. 2015. Assessment of adaptability of recently released salt tolerant rice varieties in coastal regions of South Bangladesh. *Field Crops Res.* <http://dx.doi.org/10.1016/j.fcr.2015.09.012>.

- 13) **Sarker, M. R. A.**, Sharma, N., Rahman, M. A., Islam, M. R., Islam, S. A., Khanom, M. R. and Khan, M. A. I. 2018. Identification of Modern Aman Rice Varieties Suitable for Salt Affected Satkhira region of Bangladesh. *The Experiment* 46(3): 2632-2642.
- 14) Rahman, M. A., Quddus, M. R., Jahan, N., Rahman, M. A., **Sarker, M. R. A.**, Hossain, H. and Iftekharuddaula, K. M. 2019. Field Rapid Generation Advance: An Effective Technique for Industrial Scale Rice Breeding Program *The Experiment* 47(2): 2659-2670.

Journal paper (Short Communication)

1. Salam, M. A., Rahman, M. A., Bhuiyan, M. A. R., Uddin, K., **Sarker, M. R. A.** Yasmeen, R. and Rahman, M. S. 2007. BRRI dhan47: a salt-tolerant variety for the boro season. *International Rice Research Notes (IRRN)*. 32.1: 42-43.

B. List of Books/Monographs/Bulletins

1. Kamruzzaman, M.; E.S.M.H. Rashid; **M.R.A. Sarker** and M. Khalequzzaman. 2003. Participatory Variety Selection in Rice: In the context of South-west of Bangladesh. (In: *Bengali*). (ED.) M.K. Bashar. Published by Genetic Resources and Seed Division, Bangladesh Rice Research Institute, Gazipur-1701. Pp1-20.
2. Fatema, K.; S.H. Habib; **M.R.A. Sarker** and E.S.M.H. Rashid. 2003. Booklet on planning workshop on sustainable rice seed network held on 18 may 2003. (In: *Bengali*) Edited by Bashar, M.K. and M. Khalequzzaman. Published by Genetic Resources and Seed Division, Bangladesh Rice Research Institute, Gazipur-1701 in August 2003. Pp1-15.
3. **Sarker, M. R. A.**; N. Sharma, M. A. Rahman, M. R. Islam, H. U. Ahmed. 2014. Cultivation Procedure of Aus and Boro seasons suitable Rice Variety BRRI dhan55 (In Bengali). Plant Breeding Division, Bangladesh Rice Research Institute, Gazipur 1701, Bangladesh.
4. **Sarker, M. R. A.**; N. Sharma, M. A. Rahman, M. R. Islam, H. U. Ahmed. 2014. Cultivation Procedure of Salt Tolerant Rice Variety BRRI dhan61 (In Bengali). Plant Breeding Division, Bangladesh Rice Research Institute, Gazipur 1701, Bangladesh.
5. **Sarker, M. R. A.**; K. M. Iftekharuddaula and M. A. Rahman. SPGR Sub-Project Completion Report on Pyramiding Salinity and Submergence tolerance genes into BRRI dhan49 through Marker Assisted Selection. June 2014. PIU-BARC, NATP: Phase-I, BRAC Complex, Framgate, Dhaka-1215, Bangladesh. Pp1-30.
6. Islam, M. S.; **M. R. A. Sarker**, S. Pramanik, M. M. Hasan and M. E. Haque. 2016. Modern Rice Cultivation Farmer's Training Manual (In Bengali). In M. S. Islam and **M. R. A. Sarker** (Eds). Publication No. 217. Bangladesh Rice Research Institute, Regional Station, Rangpur, Bangladesh. Pp1-44.
7. Ali, M. G.; M. S. Islam, B. P. Roy; S. M. Sharier; M. S. Mia; M. A. Badsha; M. R. Hasan; **M. R. A. Sarker**; M. M. Hasan and S. Pramanik. 2016. Comprehensive Report of IAPP BRRI Rangpur: July 2012-June 2016. In M. S. Islam and **M. R. A. Sarker** (Eds). Integrated Agricultural Productivity Project (IAPP)-BRRI. Bangladesh Rice Research Institute, Regional Station, Rangpur, Bangladesh. Pp1-56.
8. Rahman, M. A.; **M. R. A. Sarker**, M. Khatun, T. L. Aditya and K. M. Iftekharuddaula. 2016. Cultivation Procedure of Drought Tolerant Broadcast Aus Rice Variety BRRI dhan65 (In Bengali). Plant Breeding Division, Bangladesh Rice Research Institute, Gazipur 1701, Bangladesh

9. Rahman, M. A.; **M. R. A. Sarker**, N. Jahan, T. L. Aditya and K. M. Iftekharuddaula. 2016. Cultivation Procedure of Salt Tolerant Boro Rice Variety BRRI dhan67 (In Bengali). Plant Breeding Division, Bangladesh Rice Research Institute, Gazipur 1701, Bangladesh
10. Rahman, M. A.; **M. R. A. Sarker**, N.Sharma, M. A. Hossain, S. Maniruzzaman and Nurat Jahan. 2016. Participatory varietal selection (PVS) and validation of newly released varieties/lines in south-central region through IAPP: a glimpse of four years activities. Integrated Agricultural Productivity Project (IAPP)-BRRI. Plant Breeding Division. Bangladesh Rice Research Institute, Bangladesh
11. Aditya, T. I.; M. Anisuzzaman, A. Rahman, M. A. Kadeer and **M. R. A. Sarker**. 2018. BRRI dhan81: The complementary variety of popular BRRI dhan28 and local Zira for Boro season (In Bengali). Plant Breeding Division, Bangladesh Rice Research Institute, Gazipur 1701, Bangladesh.
12. **Sarker, M. R. A.**; M. S. Rahman, M. A. Rahman, R. Karim, Z. I. Seraj and K. M. Iftekharuddaula. 2021. The use of fluorescence-labeled SNP marker in Rice Breeding: Application of this method for introgression of salt tolerant QTLs (In Bengali & English). A booklet jointly published by the Plant Breeding Division, BRRI, Gazipur, and Department of Biochemistry and Molecular Biology, Dhaka University, Bangladesh. April 2021.

C. List of proceedings of Seminar/Workshop/Reports/Abstracts/Thesis/Others

1. **MRA Sarker**, 2001. Genetic Analysis of Seed Yield in F₂ Diallel population of Dry Bean, M. S. Thesis in Genetics and Plant Breeding. Bangladesh Agriculture University, Mymensingh-2202.
2. MK Bashar, M. Khalequzzaman, M.S. Ahmed, E.S.M.H. Rashid and **M.R.A. Sarker** (2004). Rice diversity Evaluation and Utilization in Southwest of Bangladesh. Pp285-298. Proceeding of the workshop on Technology Development. Organized by PETRRA-IRRI and BRRI, Gazipur, Bangladesh, Held on 23-24 May 2004, 338p.
3. MK Bashar, M. Khalequzzaman, M.S. Ahmed, E.S.M.H. Rashid, **M.R.A. Sarker**, K. Fatema and S.H. Habib. 2004. Rice Germplasm collection, characterization and Evaluation in coastal wetlands of Bangladesh. A paper presented in a workshop on Development of high yielding rice varieties for the coastal wetlands of Bangladesh, Held in Dhaka on 28-29 April 2004.
4. MK Bashar, A.A. Tutu, S. Sen, M. Kamruzzaman, M. Khalequzzaman, M.S. Ahmed, E.S.M.H. Rashid and **M.R.A. Sarker**. 2004. Final Evaluation report on Rice diversity and production in the Southwest of Bangladesh: Using Diversity and Local Knowledge to create sustainable livelihoods in the coastal Area of Bangladesh. Published by Genetic Resources and Seed Division, Bangladesh Rice Research Institute. Pp1-122.
5. MK Bashar, M. Khalequzzaman, M.S. Ahmed, E.S.M.H. Rashid, **M.R.A. Sarker**; K. Fatema and D.A.N. Majumder. 2004. Completion report of the project on "Sustainable Rice seed Network." Published by Genetic Resources and Seed Division, Bangladesh Rice Research Institute, Gazipur-1701. Pp1-65.
6. MK Basher, M.S. Ahmed, K. Akhter, E.S.M.H. Rashid, **M.R.A. Sarker** and K. Fatema. 2002. Completion report on Breeder Seed Production and Distribution. A Improved Uptake Pathway Sub-project of PETRRA. Genetic Resources and Seed Division, Bangladesh Rice Research Institute, Gazipur-1701.

7. GJU Ahmed, M.K.A. Bhuiyan and **M.R.A. Sarker**. Weed Management Research and technology developed at BRRI (1974-2004). Agronomy Division, Bangladesh Rice Research Institute, Gazipur-1701.
8. **MRA Sarker**, 2013. Identification of novel QTLs associated with salinity tolerance in rice and introgression of *SALTOL* into a popular variety using marker assisted backcrossing. PhD Thesis in Genetics and Plant Breeding. Bangladesh Agriculture University, Mymensingh-2202.
9. **MRA Sarker**, M.A. Newaz, M.P.de Ocampo, M.J. Thomson, A.M. Ismail. Identification of novel QTLs associated with salinity tolerance in rice at seedling stage using Chikiram Patnai/Azucena cross. Abstract presented at the 7th International Rice Genetics Symposium (RG7). Held on 5-8 November, 2013, Manila, Philippines.
10. MA Rahman, **M.R.A. Sarker**, N. Sharma, M.R. Islam, G.B. Gregorio and E. Humphreys. 2013. Turning adversity into opportunity. *CURE Matters* 3(1): page 16.
11. **MRA Sarker**, M.A. Newaz, M.J. Thomson, A.M. Ismail. Identification of novel QTLs associated with salinity tolerance in rice and introgression of *SALTOL* into a popular variety using marker assisted backcrossing. Paper presented at BRRI Thursday seminar on 5 June 2014. BRRI. Gazipur.
12. MA Rahman, **M.R.A. Sarker**, N. Sharma, M.K. Mondal, M.R. Islam, G.B. Gregorio, T.P. Tuong, E. Humphreys. Challenges and opportunities for *aman* rice in *ghers* used for brackish water shrimp production. Abstract presented at international conference on “Revitalizing the Ganges Coastal zone: Tuning into Policy and Practices”. Challenge Program on Water and Food (CPWF). Held on 21-23 October, 2014. Dhaka, Bangladesh.
13. **MRA Sarker**, N. Sharma, M.A. Rahman, H.U. Ahmed, M.K. Mondal, M.R. Islam, G.B. Gregorio, T.P. Tuong, E. Humphreys. Identification of suitable boro varieties to intensify crop production in salt affected coastal zone of Bangladesh. Abstract presented at international conference on “Revitalizing the Ganges Coastal zone: Tuning into Policy and Practices”. Challenge Program on Water and Food (CPWF). Held on 21-23 October, 2014. Dhaka, Bangladesh.
14. MR Islam, M.A. Rahman, **M.R.A. Sarker**, N. Sharma, M.K. Mondal, G.B. Gregorio, T.P. Tuong, E. Humphreys. Performance of improved Aman rice varieties in the coastal regions of Bangladesh. Abstract presented at international conference on “Revitalizing the Ganges Coastal zone: Tuning into Policy and Practices”. Challenge Program on Water and Food (CPWF). Held on 21-23 October, 2014. Dhaka, Bangladesh.
15. **MRA Sarker**, M. A. Newaz, M. P. de Ocampo, M. J. Thomson, A. M. Ismail. Introgression of the *Saltol* QTL into BRRI dhan29, a popular variety in Bangladesh, using marker assisted backcrossing. Abstract presented at the 4th International Rice Congress (IRC2014). Held on 27 October-1 November, 2014, Bangkok International Trade and Exhibition Center (BITEC), Bangkok, Thailand.
16. KM Iftakharuddaula, S.Ghosal, **M.R.A. Sarker** and T.L. Aditya. 2015. Development of short duration submergence tolerant rice varieties through marker assisted breeding. In M A Saleque, M A Kashem, M A Ali and M S Kabir (Eds.) Bangladesh rice research abstract 2014. Bangladesh Rice Research Institute, Gazipur 1701, Bangladesh.

17. **MRA Sarker**, N. Sharma¹, M.H. Kabir, R. Yasmeen, H.U. Ahmed and T.L. Aditya. 2015. Progress of salt tolerant rice variety development for the coastal regions of Bangladesh. In M A Saleque, M A Kashem, M A Ali and M S Kabir (Eds.) Bangladesh rice research abstract 2014. Bangladesh Rice Research Institute, Gazipur 1701, Bangladesh.
18. **MRA Sarker**, M. A. Rahman, N. Sharma, M. R. Islam, M. K. Mondal, G. B. Gregorio, E. Humphreys and T. P. Tuong. 2015. Performance of improved *aman* rice varieties in the coastal zone of Bangladesh. In Humphreys, E., T. P. Tuong, M. C. Buisson, I. Pukinskis and M. Phillips (Eds). 2015. Revitalizing the Ganges Coastal Zone: Turning Science into Policy and Practices Conference Proceedings. Colombo, Sri Lanka: CGIAR Challenge Program on Water and Food (CPWF). 600pp.
19. Rahman, M. A.; **M. R. A. Sarker**, N. Sharma, M. K. Mondal, M. R. Islam, G. B. Gregorio, E. Humphreys and T. P. Tuong. 2015. Challenges and opportunities for *aman* rice cultivation in *ghers* used for brackish water shrimp production. In Humphreys, E., T. P. Tuong, M. C. Buisson, I. Pukinskis and M. Phillips (Eds). 2015. Revitalizing the Ganges Coastal Zone: Turning Science into Policy and Practices Conference Proceedings. Colombo, Sri Lanka: CGIAR Challenge Program on Water and Food (CPWF). 600pp.
20. **Sarker, M. R. A.**; W. Afrin, P. S. Biswas and K. M. Iftekharuddaula. 2019. Progress of Favorable Boro and Cold Tolerant Rice Variety Development. Paper presented at BIRRI Thursday seminar on 31st October 2019. BIRRI Gazipur.
21. **Sarker, M. R. A.**; S. J. Ahamed, M. S. Rahman and M. A. Haque. 2019. Genetic Diversity Analysis of Rice Genotypes using Microsatellite Markers associated with the *Saltol* QTL region of Chromosome 1. 11th Biennial Conference 2019. Plant Breeding and Genetics Society of Bangladesh. Held on 28-29 December 2019, ACI Center, 245 Tejgaon, Dhaka.
22. Biswas, P. S., **M. R. A. Sarker**, W. Afrin, K. M. Iftekharuddaula, M. A. Rahman, M. Khatun, M. A. Kader, T. L. Aditya, M. R. Islam, G. N. Atlin and M. S. Kabir. 2019. Estimation of Breeding Values and use in Parental Selection Decision Accelerates Genetic Gain in Rice. 11th Biennial Conference 2019. Plant Breeding and Genetics Society of Bangladesh. Held on 28-29 December 2019, ACI Center, 245 Tejgaon, Dhaka.
23. Afrin, W., **M. R. A. Sarker**., P. S. Biswas and K. M. Iftekharuddaula. 2019. Quality control (QC) genotyping of parental lines for precision rice breeding. 11th Biennial Conference 2019. Plant Breeding and Genetics Society of Bangladesh. Held on 28-29 December 2019, ACI Center, 245 Tejgaon, Dhaka.
24. Iftekharuddaula, K. M.; P. S. Biswas, M. A. Rahman, M. Khatun, M. A. Kader, **M. R. A. Sarker**, S. Ghosal, M. A. Latif, R. Yasmeen, T. L. aditya and M. S. Kabir. 2019. Molecular Rice Breeding at BIRRI: Progress and Way Forward. Abstract presented at 4th Innovations in Plant & Food Sciences (IPFS) and International Conference on Biotechnology in Health & Agriculture (ICBHA). Held on 11-13 November, 2019. Nabab Nawab Ali Chowdhury Senate Bhaban, University of Dhaka, Dhaka, Bangladesh. 1-180pp.
25. Rahman, M. S.; **M. R. A. Sarker**, A. Biswas, M. A. Rahman, R. Yasmeen, J. K. Biswas and Z. I. Seraj. 2019. Mapping QTLs from Bangladeshi salinity tolerant rice landrace Ashfalbalam. Abstract presented at 4th Innovations in Plant & Food

- Sciences (IPFS) and International Conference on Biotechnology in Health & Agriculture (ICBHA). Held on 11-13 November, 2019. Nabab Nawab Ali Chowdhury Senate Bhaban, University of Dhaka, Dhaka, Bangladesh. 1-180pp.
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Dr. Md. Ruhul Amin Sarker
Senior Scientific Officer
Plant Breeding Division
Bangladesh Rice Research Institute
Gazipur-1701, Bangladesh
E-mail: mrabrri@yahoo.com
Cell# 0088-01712674693