

Curriculum Vitae

Specialization: Plant Breeding, Genetics



1. Name: **Dr. MD. RUHUL AMIN SARKER**
2. Field of Socialization: Molecular Plant Breeding, Genetics and Physiology of Abiotic Stress
3. Father's name: Md. Abdul Quddus Sarker
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Permanent: Village- Sreekhandi, P.O.- Marirhat
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Present: Senior Scientific Officer
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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	Duration & year	
		From	To
Breeder Seed Production	BRRI, Gazipur	02 Dec. 2001	06 Dec. 2001
Hybrid Rice Seed Production	BRRI, Gazipur	15 Nov. 2003	16 Nov. 2003
Foundation Training Course for NARS Scientists (Batch-12)	BARD, Comilla	27 Feb. 2005	26 June 2005
Conservation and Utilization of Plant Genetic Resources	BARI, Gazipur	19 Mar. 2007	22 Mar. 2007
Rice Production Training Course	BRRI, Gazipur	27 Jul. 2008	25 Aug. 2008
GCP Training Workshop on Marker Assisted Breeding for Bangladesh	BRRI, Gazipur	18 Nov. 2008	27 Nov. 2008
Training Workshop on Research Proposal Preparation and Scientific Report Writing	BARC-CMD, Gazipur	9 Feb. 2013	13 Feb. 2013

b) International

Title	Location	Duration & year	
		From	To
Rice Breeding Course: Laying the Foundation for the Second Green Revolution	IRRI, Philippines	01 Oct. 2007	12 Oct. 2007
Scientific Writing Workshop	IRRI, Philippines	04 Aug. 2009	10 Aug. 2009
Basic Bioinformatics Course	IRRI, Philippines	05 Nov. 2009	06 Nov. 2009
SNP Data Analysis Training Course	IRRI, Philippines	09 Mar. 2011	11 Mar. 2011

12. Research experience

Name of Organization(s)	Designation	Duration		Responsibilities
GRSD, BRRI, Gazipur	Scientific Officer	01 July 2001	16 June 2004	Breeder seed production, Planning, designing and execution of research program on rice breeding.
Plant Breeding Division, BRRI, Gazipur	Scientific Officer	16 June 2004	11 Jan. 2011	Planning, designing and execution of research program on rice breeding. Evaluation of yield trials and report writing.
IRRI, Philippines	PhD Research Scholar	19 April 2009	18 Oct. 2012	<ul style="list-style-type: none"> ➤ Identification of novel QTLs associated with salinity tolerance at seedling stage using Chikiram Patnai/Azucena cross. ➤ Confirmation of one major QTL other than

				<i>Saltol</i> using FL478/IR29 NILs. ➤ Introgression of <i>Saltol</i> QTL into BRR I dhan29 through marker-assisted backcrossing.
Plant Breeding Division, BRR I, Gazipur	Senior Scientific Officer	12 Jan. 2011	To date	Planning, designing and execution of research program on rice breeding. Evaluation of yield trials and report writing. Execute research experience on participatory varietal selection (PVS) for coastal saline environment.

13. Salient Research accomplishments (in brief):

Sl#	Tec. Developed	Type of technology	Working as	Year of release
1.	BRR I dhan47	Saline tolerant Boro rice variety	Co-investigator	2007
2.	BRR I dhan48	Transplanted Aus rice variety	Co-investigator	2008
3.	BRR I dhan61	Saline tolerant Boro rice variety	Co-investigator	2013
4.	BRR I dhan65	Broadcast Aus rice variety	Principal Investigator	2014
5.	BRR I dhan67	Saline tolerant Boro rice variety	Principal Investigator	2014
6.	BRR I dhan29- <i>Saltol</i>	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 BRR I dhan49 through marker-assisted selection (NATP).
5. Asian Food and Agriculture Cooperation Initiative (AFACI Food Security Project-Salinity) Funded by South Korea.
6. Integrated Agricultural Productivity Project (IAPP-Breeding Salinity)

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 BRRI 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.

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.

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

1. **Sarker, M. R. A.** 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 BIRRI Thursday seminar on 5 June 2014. BIRRI. Gazipur.
12. **MRA Sarker**, KM Iftekharruddaula and MA Rahman. SPGR Sub-Project Completion Report on Pyramiding Salinity and Submergence tolerance genes into BIRRI dhan49 through Marker Assisted Selection. June 2014. PIU-BARC, NATP: Phase-I, BRAC Complex, Framgate, Dhaka-1215, Bangladesh.
 13. 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.
 14. **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.
 15. 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.
 16. **MRA Sarker**, M. A. Newaz, M. P. de Ocampo, M. J. Thomson, A. M. Ismail. Introgression of the *Saltol* QTL into BIRRI 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.

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