

Curriculum vitae

Personal information:

1. **Name** : **DR. QUAZI MD. MOSADDEQUE HOSSEN**
2. **Father's name** : Kazi Abdul Hye
3. **Mother's name** : Kazi Mazedda Begum
4. **Husband's name** : Not applicable
5. **Gender** : Male
6. **Present Address** : 123/3, Jute Research Officers' quarters,
Bangladesh Jute Research Institute, Manik Miah
Avenue, Dhaka-1207
7. **Permanent Address** : Village: Akhira, P.O.: Daudpur (5281),
Upazilla: Nawabganj, District: Dinajpur
8. **Date of Birth** : December 30, 1974
9. **Age** :
10. **Educational Qualification** :

Degree/Diploma/Certificate	Class/Grade/Division	University/Institute/Board	Year of Passing
S.S.C	First	Rajshahi	1990
H.S.C	First	Rajshahi	1992
B.Sc.Ag/M.Sc./Equiv.	Second	Bangladesh Agricultural University, Mymensing	1996
M.Sc.Ag/Equiv.	First	Bangladesh Agricultural University, Mymensing	2001
Ph.D.	Awarded	Jahangirnagar University, Savar, Dhaka	2019

11. Field of Specialization:

1. Functional genomics emphasized on cross-talk phenomena among microbes and corresponding host.
2. Molecular plant Pathology (Whole genome Optical mapping of fungi; R-gene analysis and Pathogen-host interaction leads to develop fungi resistant jute plant).
3. Chemical Mutation Breeding (Especially by Ethyl Methane Sulfonate-EMS induction on jute seed) for development of desired trait in Jute.
4. Production of Restriction endonuclease for cleavage of Heteroduplex DNA created from SNPs derived mismatches (Especially CELi restriction endonuclease from Celery plant- (*Apium graveolens* L.))
5. Genetic Transformation through tissue culture in Jute (Especially in *Capsularis* jute).

12. Training:

(a) In Country:

Sl	Organization	Year	Duration		Name of Program
			Mos.	Days	
01.	Bangladesh Academy for Rural Development	2006	04	-	Foundation Training for NARS scientists (Batch-13)
02.	Graduate Training Institute	2005	-	13	Statistical Analysis by using computer packages
03.	Molecular Biology Lab, Department of Biochemistry and Molecular Biology, University of Dhaka	2010	-	17	Functional Genomics of Jute
04.	Sher-E-Bangla Agricultural University, Dhaka	2007	2	20	Post Graduate certificate course on Seed Technology
05.	Bangladesh Road Transport Corporation, Central Training Institute, Gazipur	2006	-	18	Special light driving training
06.	Bangladesh Computer Council,	2009	-	15	Introduction to

07.	Dhaka Graduate Training Institute, 2009 - Mymensingh	13	Office Application Research Methodology
08.	Rural Development Academy, 2006 - Bogra	05	Attachment Programme of Foundation course
09.	Bangladesh Jute Research Institute, 2008 - Dhaka	02	Modern Jute and Kenaf Seed Production & Storage Technology
10.	Bangladesh Jute Research Institute, 2019 - Dhaka	01	Strategic implementation of National Integrity
11.	Bangladesh Jute Research Institute, 2019 - Dhaka	02	Innovation in Public Service
12.	Pacific Biosciences, Tree Code, 2018 - Sdn, Bhd, Malaysis-Training held at BARJ, BJRI, Dhaka	05	Pacific Biosciences New SEQUEL Instrument Post Installation Application Training with 30kb SMRTbell®Express Library Preparation
13.	Eppendorf Training Centre, Chennai; Training held at BARJ, BJRI, Dhaka	- 2017	03 Eppendorf Fermentor BioFlo 415 (SIP)
14.	BESCO Biological Safety Institute; Training held at BARJ, BJRI, Dhaka	2017 -	01 Overview & Safe Use of Laboratory Ventillation Equipment, (Laminar Air Flow, Biosafety Cabinets

					and Fume hood)
15.	Bangladesh Jute Research Institute, Dhaka	- 2019	01		Jute Industrial Product Research and Development
16.	Bangladesh Jute Research Institute, Dhaka	- 2019	01		Jute Textile Product Research and Development

(b) Abroad:

Sl	Organization	Year	Duration		Name of Program
			Mos.	Days	
01.	Centre for Chemical Biology, Penang, Malaysia	2011	-	25	Phenotypic Microarray
02.	Centre for Chemical Biology, Penang, Malaysia	2012	-	28	DNA microarray
03.	TEDA College of Biological Sciences	2014	03	-	Whole genome Optical Mapping of <i>Macrophomina</i> <i>Phaseolina</i> MS6

13. Experience

Organizations	Position and Division	Period of Employment		
		From	To	Total period yr/mo
Bangladesh Jute Research Institute	Scientific Officer	01/11/2004	24/11/2015	11 yr/23 days
Bangladesh Jute Research Institute	Senior Scientific Officer	25/11/2015	17/10/2021	05 yr/10m/23 days
Bangladesh Jute Research Institute	Principal Scientific Officer	18/10/2021	Till to date	

14.Publications:

(a) Full scientific paper as principal author

1. **Quazi Md. Mosaddeque Hossen**, Md. Shahidul Islam, Emdadul Mannan Emdad, Md. Samiul Haque, Md. Monjurul Alam and Maqsudul Alam,. "Whole-genome optical mapping: Improving assembly of *Macrophomina phaseolina* MS6 through spanning of twelve blunt end chromosomes by obviating all errors and misassemblies." *African Journal of Biotechnology* 18, no. 31 (2019): 1031-1043. <https://doi.org/10.5897/AJB2019.16978> (Page-35-39)
2. **Quazi Md. Mosaddeque Hossen**, Rahman, S.M.B., Rahman, M.N. *et al.* Development of early flowering, short life-spanned jute (*Corchorus* spp.) mutant via ethyl methane sulfonate mutagenesis. *J. Crop Sci. Biotechnol.* **25**, 489–500 (2022). <https://doi.org/10.1007/s12892-022-00146-4>
3. **Mosaddeque, H.Q.M.**, Talukder, M.I., Islam, M.M., Khusrul Amin, A.K.M., Alam, M.A. 2008. Screening of Some Restorer and Maintainer Hybrid Lines Against Sheath Blight (*Rhizoctonia Solani*). *J. Soil. Nature.* 2 (1):23-29. (Page-59-62)
4. **Mosaddeque, H.Q.M.**, Sultana, K., Islam, M.I., Amin, M.R., Shahadat, M. 2007. Effect of bacterial leaf blight (*Xanthomonas campestris* pv. *oryzae*) on some restorer and maintainer lines of hybrid rice. *J. Subtrop. Agric. Res. Dev.* 5 (6): 361-366. (Page-63-65)
5. **Mosaddeque, H.Q.M.**, Haque, S.M.A., Polan, M.S., Banu, H., Sultana, K. 2007. Storage effect of different container on germination and prevalence of seed borne pathogens of jute. *Int. J. Sustain. Agril. Tech.* 3 (5): 10-14. (Page-66-67)

(b) Full scientific paper as associate author

1. Md Shahidul Islam, Jennifer A. Saito, Emdadul Mannan Emdad, Borhan Ahmed, Mohammad Moinul Islam, Abdul Halim, **Quazi Md Mosaddeque Hossen**, Md Zakir Hossain, Rasel Ahmed, Md Sabbir Hossain, Shah Md Tamim Kabir, Md Sarwar Alam Khan, Md Mursalin Khan, Rajnee Hasan, Nasima Aktar, Ummay Honi, Rahin Islam, Md Mamunur Rashid, Xuehua Wan, Shaobin Hou, Taslima Haque, Muhammad Shafiul Azam, Mahdi Muhammad Moosa, Sabrina M. Elias, A. M. Mahedi Hasan, Niaz Mahmood, Md Shafiuddin, Saima Shahid, Nusrat Sharmeen Shommu, Sharmin Jahan, Saroj Roy, Amlan Chowdhury, Md Kamal Uddin, Md Sharifur Rahman, Md Samiul Haque, Md Monjurul Alam, Haseena Khan & Maqsudul Alam . 2017. Comparative genomics of two jute species and insight into fibre biogenesis. *Nature Plants* **3**, 16223 (2017). <https://doi.org/10.1038/nplants.2016.223> (Page-40-43)

2. Islam, M.S., Haque, M.S., Islam, M.M., Emdad, E.M., Halim, A., **Mosaddeque, H.Q.M.**, Hossain, M.Z., Borhan, A., Rahim, S., Rahman, M.S., Alam, M.M., Hou, S., Wan, X., Saito, J.A. and Maqsoodul Alam. Tools to kill: Genome of one of the most destructive plant pathogenic fungi *Macrophomina phaseolina*. *BMC Genomics* **13**, 493 (2012). <https://doi.org/10.1186/1471-2164-13-493> (Page-44-51)
3. Kazi Khayrul Bashar, Zablul Tareq, Md. Ruhul Amin, Ummay Honi, Md. Tahjib-Ul-Arif, Md Abu Sadat, **Quazi Md. Mosaddeque Hossen** 2019. Phytohormone-Mediated Stomatal Response, Escape and Quiescence Strategies in Plants under Flooding Stress. *Agronomy* 2019, 9(2), 43; <https://doi.org/10.3390/agronomy9020043> (Page-52-58)
4. Islam, M.M., Sultana, K., Haque, S. M. A., **Mosaddeque, H. Q. M.** Ahmed, B. 2007. Frequency of occurrences of pathogenic fungi in jute seeds. *Int. J. Sustain. Agril. Tech.* 3 (1): 01-06. (Page-68-70)
5. Sultana, K., **Mosaddeque, H.Q.M.**, Haque, S.M.A., Polan, M.S., Banu, H., 2007. Study on transmission of seed borne fungal pathogens of jute (*Corchorus capsularis*) at different rate of seed infections. *Int. J. Sustain. Agril. Tech.* 3 (4): 46-49. (Page-71-72)
6. Sultana, K., Banu, H., **Mosaddeque, H.Q.M.**, Haque, S.M.A., Polan, M.S., 2007. Effectiveness of garlic paste as jute seed treating materials and its comparison with other botanicals. *Int. J. Sustain. Agril. Tech.* 3 (5): 33-36. (Page-73-74)
7. Islam, M.N., Banu, H., Polan, M.S., Kamruzzaman, A.S.M., **Mosaddeque, H.Q.M.**, 2010. Effectiveness of some neem products on yellow mite, (*Polyphagotarsonemus latus*) and red mite (*Tetranychus biculatus*) and their impact on jute seed quality. *Eco-friendly Agril. J.* 3 (3): 134-138. (Page-75-76)
8. Haque, S.M.A., **Mosaddeque, H.Q.M.**, Sultana, K., Islam, M.N., Rahman, M.L. 2008. Effect of different trap crops against root knot nematode disease of jute. *J. innov.dev.strategy.* 2(3): 42-47. (Page-77-79)
9. Akter, N., Islam, M.M., Begum, H.A., Alamgir, A., **Mosaddeque, H.Q.M.** 2009. BJRI Tossa-5 (O-795): An improved variety of *Corchorus olitorius* L. *Eco-friendly Agril. J.* 2 (10): 864-869. (Page-80-83)
10. Hoque, M.K., Alam, M.A., Molla, M.M.U., **Mosaddeque, H.Q.M.**, Mollah, M.A.F. 2008. Environmental awareness of the FFS farmers in practicing IPM. *J. innov.dev.strategy.* 2(3): 17-21. (Page-84-86)
11. Hoque, M.K., Alam, M.A., Molla, M.M.U., **Mosaddeque, H.Q.M.**, Mollah, M.A.F. 2008. Problem confrontation of the FFS farmers in practicing IPM. *J. innov.dev.strategy.* 2(3): 12-17. (Page-87-89)

12. Ali, M.S., **Mosaddeque, H.Q.M.**, Mamun, M.A., Hossain, M.A., Haque, S.M.A. 2007. Influence of urea super granule combined with azolla manure on the growth and yield of BRRI Dhan 30. *Int. J. Sustain. Agril. Tech.* 3 (1): 27-30. (Page-90-91)
13. Haque, S.M.A., **Mosaddeque, H.Q.M.**, Ali, M.S., Rashid, M.H., Polan, M.S. 2007. Association of seed borne fungi with T. aman seed in relation to variety and farmers' seed processing activities. *Int. J. Sustain. Agril. Tech.* 3 (2): 07-10. (Page-92-93)
14. Chaudhury, M.A.R., **Mosaddeque, H.Q.M.**, Ahmed, I., Alam, M.Z., Begum, M.A. 2009. Management approach of pulse beetle (*Callosobruchus maculatus*) in pigeon pea (*Cajanus cajanus*) with different indigenous plant leaf powder. *Eco-friendly Agril. J.* 2 (8): 737-742. (Page-94-96)
15. Hossain, M.S., **Mosaddeque, H.Q.M.**, Alam, M.A., Moniruzzaman, S.M., Ahmed, I. 2007. Effect of different organic manures and nitrogen levels on yield and yield attributes of T. aman rice. *Int. J. Sustain. Agril. Tech.* 3 (1): 21-26. (Page-97-99)
16. Hasan, M.A., Dilruba, S., **Mosaddeque, H.Q.M.**, Alam, M.A., Moinuddin, F.M. 2009. Effect of vermicompost on the growth, yield and nutrient uptake by rice. *Eco-friendly Agril. J.* 2 (8): 746-750. (Page-100-102)
17. Alam, M.A., **Mosaddeque, H.Q.M.**, Hossain, M.s., Miah, A. 2009. Effect of gibberellic acid (Ga_3) and mode of application on physiology and yield of onion. *Eco-friendly Agril. J.* 2 (8): 717-721. (Page-103-105)
18. M.s. Polan, H. Banu, M.N. Islam, S.M.A. Haque and **H.Q.M. Mosaddeque**. 2009. Field Efficacy and evaluation of effective dose of some insecticides against jute hairy caterpillar *Spilarctia obliqua* (Walker). *Bangladesh J. Jute fib. Res.* 29 (1-2):69-75. (Page-106-108)
19. M.A. Hasan, M.A. Alam. **H.Q. M. Mosaddeque**. 2009. Effect of Inorganic fertilizers on the growth, yield and nutrient nutrient uptake by rice. *Eco-friendly Agril.J.*2(8):722-726.
 - a. (Page-109-110)
20. Islam M.S., Saha A.K., **Mosaddeque H.Q.M.**, Amin M.R. and Islam M.M. 2008. In Vitro Studies on the Reaction of Fungi Trichoderma to Different Herbicides Used in Tea Plantation. *Int. J. Sustain. Crop Prod.* 3(5):27-30 (Page-111-112)
21. 1M. A. F. MOLLAH, 2M. A. ALAM, 3N. ISLAM, **H.Q.M. MOSADDEQUE** AND 5M. A. H. KHAN. 2008. 2008. Socio-economic study of tossa jute seed growers in some selected areas of bangladesh. *j. innov.dev.strategy.* 2(3): 17-18. (Page-113-115)
22. M. A. F. Mollah, M. A. Alam, N. Islam, **H.Q.M. Mosaddeque** AND M. A. H. Khan. 2008. 2008. Socio-economic study of Deshi jute seed growers in some selected areas of bangladesh. *j. innov.dev.strategy.* 2(3): 17-18. (Page-116-118)

23. Biswas, A., A.K. Saha, M.A. Motalib, M.S. Islam and **H.Q.M. Mosaddeque**, 2009. Performance of biomeal (Bone meal) on the yield and soil properties of mature tea. *Eco-Friendly Agric. J.*, 2: 743-745. (Page-119120)
24. Alam M.A., Nur F., **Mosaddeque H.Q.M.**, Rhaman M. L. and Ghosh R. K. 2008. Involvement of Farmers in BAUEC Adult Education Activities in the Sadar Upazila of Mymensingh District. *j. innov.dev.strategy* 2(3): 06-11. (Page-121-123)
25. Alam M.A., Nur F., **Mosaddeque H.Q.M.**, Rhaman M. L. and Rashid M. H. 2008. Farmers Characteristics Associated with the Participation in Cottage Industry Activities of BAUEC. *j. innov.dev.strategy* 2(3): 36-41. (Page-124-126)
26. Islam M.S., Saha A.K., **Mosaddeque H.Q.M.**, Islam M. M. and Haque, S.M.A. 2008. Effect of Different Sources of Water on the Efficacy of Commonly Used Herbicides in Tea Plantation. *J. Soil. Nature.* 2(1): 14-16 (Page-127-128)
27. Alam M.A., **Mosaddeque, H.Q.M** Islam M. S., Mollah, M.A. F and Islam N. 2008. Farmers characteristics associated with the participation in health and family planning activities of bauec. *J. Innov.dev.strategy* 2(2): 11-16 (Page-129-132)
28. Alam M.A., **Mosaddeque, H.Q.M** Islam M. S., Miah, A and Moinuddin N. 2009. Farmers characteristics associated with the participation on crop improvement activities in nine villages of mymensingh district. *Eco-friendly Agril. J.* 2(7):666-670 (Page-133-135)

(c) Popular article/monograph/Bulletin

Bulletin: 01-পাটের মোজাইক রোগ দমনে করণীয়

(d) List of seminar papers/workshop/proceedings

1. National Seminar on phytopathological issues.
2. International seminar on Biotechnology

15. Research Achievement

(i) **No. of Technology developed**

a) Solely: 02

1. Extraction of Restriction Ennuclease CELi from *Apium graveolens* L. in Bangladesh.

Uses: Cleave the mis-match Heteroduplex position of pooled DNA from wild and mutant plants for confirmation of mutant gene along with Single Nucleotide Polymorphisms (SNPs).

2. Developed and standardization of Chemical mutagenesis (Ethyl Methane Sulfonate-EMS) protocol for Jute in Bangladesh.

Uses: To develop desired traits in jute.

b) As Team member-13:

1. Mechanism involved in disease resistant in jute plant.
2. Genomics insight into flowering plants especially in jute.
3. Phytohormone-Mediated Stomatal Strategies in Plants under Flooding Stress.
4. Use of garlic as seed treating agent.
5. Use of Vitavax-200 & Provax-200 for seed treating fungicide.
6. Use of Dithane M-45 as spraying fungicide to control fungal disease.
7. Spraying of Thiovit to control powdery mildew of Capsularis jute.
8. Application of Furadan 5G for controlling root knot disease of jute.
9. Use of Trap-crop i.e. (Kushum phool, sunhemp, merrygold and kaon) in soil to control the root knot disease of jute and kenaf.
10. Use of poultry litter @1000 kg/ha for controlling root-knot disease.
11. Practice the keeping land fellow and rotational cultivation of mesta to control of nemec disease of jute.
12. Rouging out of disease plant technique to control leaf mosaic disease of jute.
13. Spraying of Diazinon to control white fly (insect) a vector of leaf mosaic disease of jute.

(ii) No. of research program

(a) Developed

(ii) No. of Research programme

(a) Developed and (b) Supervised

Sl. No.	Name of Programme	Publishing Book	Year
1.	Comparative study of major jute diseases in experimental plots and farmers' fields in some jute growing regions of Bangladesh.	BJRI Technical programme	2005-06
2.	Seed health test and pathological study of jute, kenaf and mesta seeds for recommendation.	BJRI Technical programme	2005-06
3.	Storage effect of different container to	BJRI Technical programme	2005-06

	reduce the infestation of seed borne pathogen.		
4.	Screening for resistance of jute, kenaf and mesta germplasm against fungal and nemic diseases.	BJRI Technical programme	2005-06
5.	Screening for resistant materials against biotypes of <i>Macrophomina phaseolina</i> under controlled condition.	BJRI Technical programme	2005-06
6.	Preliminary screening of bast fibre crops against root-knot disease.	BJRI Technical programme	2005-06
7.	Evaluation of new chemicals (Spraying fungicide-Manner, onthane and Microthiol) against different fungal diseases of jute.	BJRI Technical programme	2005-06
8.	Biological control of jute pathogens (Fungi) by different <i>Trichodermae</i> sp.	BJRI Technical programme	2005-06
9.	Development of thresh hold level /seed health standard for <i>Macrophomina phaseolina</i> causing organism of stem rot disease of jute.	BJRI Technical programme	2005-06
10.	Comparative study of major jute and allied fibre diseases in some jute growing regions of Bangladesh.	BJRI Technical programme	2006-07
11.	Seed health test and pathological study of jute, kenaf and mesta seeds for recommendation.	BJRI Technical programme	2006-07
12.	Assessment of varieties/advance line of jute at different locations.	BJRI Technical programme	2006-07
13.	Evaluation of new chemicals against different fungal diseases of jute.	BJRI Technical programme	2006-07
14.	Biological control of jute pathogens (Fungi) by different <i>Trichodermae</i> sp.	BJRI Technical programme	2006-07

15.	Seed health test and pathological study of jute, kenaf and mesta seeds for recommendation.	BJRI Technical programme	2007-08
16.	Investigation on the leaf yellowing and leaf curling diseases of kenaf.	BJRI Technical programme	2007-08
17.	Preliminary screening of jute and allied fibre crops against root-knot diseases (<i>Meloidogyne</i> sp.)	BJRI Technical programme	2007-08
18.	Evaluation of new fungicides against different fungal diseases of jute.	BJRI Technical programme	2007-08
19.	Comparative study of major jute and allied fibre crops diseases in some jute growing regions of Bangladesh.	BJRI Technical programme	2007-08
20.	Pathological study of jute, kenaf and mesta seeds for recommendation	BJRI Technical programme	2008-09
21.	Field evaluation of <i>Trichoderma</i> spp. for controlling soil borne fungal diseases of jute.	BJRI Technical programme	2008-09
22.	Effect of different soil amendments with selected treatments for controlling nematode population in soil.	BJRI Technical programme	2008-09
23.	Integrated management of fungal diseases of jute.	BJRI Technical programme	2008-09
24.	Investigation on the leaf yellowing and leaf curling diseases of kenaf.	BJRI Technical programme	2008-09
25.	Comparative study of major jute and allied fibre crops diseases in some jute growing regions of Bangladesh.	BJRI Technical programme	2008-09

26.	Pathological study of jute, kenaf and mesta seeds for recommendation	BJRI Technical programme	2008-09
27.	Field evaluation of <i>Trichoderma</i> spp. for controlling soil borne fungal diseases of jute.	BJRI Technical programme	2008-09
28.	Evaluation of new seed treating and spraying fungicides against seed borne pathogens of jute, kenaf and mesta.	BJRI Technical programme	2009-10
29.	Effect of different soil amendments with selected treatments for controlling nematode population in soil.	BJRI Technical programme	2009-10
30.	Integrated management of fungal diseases of jute.	BJRI Technical programme	2009-10
31.	Investigation on the leaf yellowing and leaf curling diseases of kenaf.	BJRI Technical programme	2009-10
32.	Selection of varieties/accessions of jute due to leaf mosaic disease under field condition.	BJRI Technical programme	2009-10
33.	Seed health test and Pathological study of jute, kenaf and mesta seeds for recommendation	BJRI Technical programme	2010-11
34.	Screening for resistant materials of <i>Macrophomina phaseolina</i> under controlled condition.	BJRI Technical programme	2010-11
35.	Preliminary screening of jute and allied fibre crops against root-knot disease.	BJRI Technical programme	2010-11
36.	Biological control of jute pathogens (Fungi) by different <i>Trichodermae</i> sp.	BJRI Technical programme	2010-11

37.	Integrated management of fungal diseases of jute.	BJRI Technical programme	2010-11
38.	Field evaluation of <i>Trichoderma</i> spp. for controlling soil borne fungal diseases of jute.	BJRI Technical programme	2010-11
39.	Assessment of yield loss due to leaf curling and leaf yellowing of kenaf.	BJRI Technical programme	2010-11
40.	Survey of diseases of jute and allied fibre crops.	BJRI Technical programme	2010-11
41.	Training on management approaches of newly appeared pests and diseases of jute, kenaf and mesta	BJRI Technical programme	2010-11
42.	Genome sequence of Tossa jute (O-4)	BARJ Technical programme	2010-11
43.	Genome sequence of <i>Macrophomina phaseolina</i> MS6	BARJ Technical programme	2011-12
44.	Standardization of mutagen (EMS-Ethyl methane sulfonate) Lethal dose (LD50)for Capsularis (CVL-1, CBS-718) and olitorius (O-9897) jute in lab and field conditions.	BARJ Technical programme	2011-12
45.	Screening of useful mutants through chemical mutagenesis for variety development	BARJ Technical programme	2013-14
46.	Phenotypic microarray of <i>Macrophomina phaseolina</i> MS6	BARJ Technical programme	2013-14
47.	Fixation of Tissue culture protocol for efficient genetic transformation in jute.	BARJ Technical programme	2013-14
48.	Genome sequence of Deshi jute (CVL-1)	BARJ Technical programme	2014-15

49.	Construction of whole genome optical maps of <i>Macrophomina phaseolina</i> L.	BARJ Technical programme	2014-15
50.	Characterization of <i>C. olitorius</i> germplasm (a total of 1410 accession)	BARJ Technical programme	2014-15
51.	Fixation of Tissue culture protocol for efficient genetic transformation in jute.	BARJ Technical programme	2014-15
52.	Screening of <i>Macrophomina phaseolina</i> MS6 tolerant germplasm from wild genotype of jute	BARJ Technical programme	2015-16
53.	Chemical mutagenesis for development of day-neutral and <i>Macrophomina phaseolina</i> MS6 tolerant jute genotype.	BARJ Technical programme	2015-16
54.	Varietal trial (MLT-Multi Location Trial) of BARJ developed advance line (Robi-1, Shoshi-1) at different locations in Bangladesh.	BARJ Technical programme	2015-16
55.	Chemical mutagenesis for development of day-neutral and <i>Macrophomina phaseolina</i> MS6 tolerant jute genotype	BARJ Technical programme	2016-17
56.	Development, characterization and stability analyses of EMS derived early flowering, day-neutral capsularis jute genotype (Komola).	BARJ Technical programme	2016-17
57.	Histochemical and Biochemical (Elemental Analysis, Fourier-transform infrared spectroscopy, ¹ H NMR- Proton Nuclear Magnetic Resonance) analyses of early flowering and day-neutral mutant.	BARJ Technical programme	2017-18
58.	Production of CELI restriction enzyme from celery plant (<i>Apium graveolens</i> L.) and efficacy assessment in pooled DNA.	BARJ Technical programme	2017-18
59.	TILLinG (Target Induced Local Genomes) of flowering genes for detection of responsive candidate gene (s) of early flowering and day-neutral mutant.	BARJ Technical programme	2017-18

60.	Functional genomics of day-neutral and <i>Macrophomina phaseolina</i> MS6 tolerant jute plant	BARJ Technical programme	2018-19
61.	Transformation of growth enhancing candidate genes GA2, GA3 and GA20 oxidase into day-neutral “Komola” mutant	BARJ Technical programme	2019-20
62.	R-gene analyses of Dhaincha (<i>Sesbania</i>)	BARJ Technical programme	2019-20

No. of Research programme

(c) Executed

Sl. No.	Name of Programme	Publishing Book	Year
1.	Comparative study of major jute diseases in experimental plots and farmers’ fields in some jute growing regions of Bangladesh.	BJRI Annual Report	2006-07
2.	Seed health test and pathological study of jute, kenaf and mesta seeds for recommendation.	BJRI Annual Report	2006-07
3.	Storage effect of different container to reduce the infestation of seed borne pathogen.	BJRI Annual Report	2006-07
4.	Screening for resistance of jute, kenaf and mesta germplasm against fungal and nematode diseases.	BJRI Annual Report	2006-07
5.	Screening for resistant materials against biotypes of <i>Macrophomina phaseolina</i> under controlled condition.	BJRI Annual Report	2006-07
6.	Preliminary screening of bast fibre crops against root-knot disease.	BJRI Annual Report	2006-07
7.	Evaluation of new chemicals (Spraying fungicide-Manner, onthane and Microthiol) against different fungal	BJRI Annual Report	2006-07

	diseases of jute.		
8.	Biological control of jute pathogens (Fungi) by different <i>Trichodermae</i> sp.	BJRI Annual Report	2006-07
9.	Development of thresh hold level /seed health standard for <i>Macrophmina phaseolina</i> causing organism of stem rot disease of jute.	BJRI Annual Report	2006-07
10.	Comparative study of major jute and allied fibre diseases in some jute growing regions of Bangladesh.	BJRI Annual Report	2007-08
11.	Seed health test and pathological study of jute, kenaf and mesta seeds for recommendation.	BJRI Annual Report	2007-08
12.	Assessment of varieties/advance line of jute at different locations.	BJRI Annual Report	2007-08
13.	Evaluation of new chemicals against different fungal diseases of jute.	BJRI Annual Report	2007-08
14.	Biological control of jute pathogens (Fungi) by different <i>Trichodermae</i> sp.	BJRI Annual Report	2007-08
15.	Seed health test and pathological study of jute, kenaf and mesta seeds for recommendation.	BJRI Annual Report	2008-09
16.	Investigation on the leaf yellowing and leaf curling diseases of kenaf.	BJRI Annual Report	2008-09
17.	Preliminary screening of jute and allied fibre crops against root-knot diseases (<i>Meloidogyne</i> sp.)	BJRI Annual Report	2008-09
18.	Evaluation of new fungicides against different fungal diseases of jute.	BJRI Annual Report	2008-09

19.	Comparative study of major jute and allied fibre crops diseases in some jute growing regions of Bangladesh.	BJRI Annual Report	2008-09
20.	Pathological study of jute, kenaf and mesta seeds for recommendation	BJRI Annual Report	2009-10
21.	Field evaluation of <i>Trichoderma</i> spp. for controlling soil borne fungal diseases of jute.	BJRI Annual Report	2009-10
22.	Effect of different soil amendments with selected treatments for controlling nematode population in soil.	BJRI Annual Report	2009-10
23.	Integrated management of fungal diseases of jute.	BJRI Annual Report	2009-10
24.	Investigation on the leaf yellowing and leaf curling diseases of kenaf.	BJRI Annual Report	2009-10
25.	Comparative study of major jute and allied fibre crops diseases in some jute growing regions of Bangladesh.	BJRI Annual Report	2009-10
26.	Pathological study of jute, kenaf and mesta seeds for recommendation	BJRI Annual Report	2009-10
27.	Field evaluation of <i>Trichoderma</i> spp. for controlling soil borne fungal diseases of jute.	BJRI Annual Report	2009-10
28.	Evaluation of new seed treating and spraying fungicides against seed borne pathogens of jute, kenaf and mesta.	BJRI Annual Report	2010-11
29.	Effect of different soil amendments with selected treatments for controlling nematode population in soil.	BJRI Annual Report	2010-11

30.	Integrated management of fungal diseases of jute.	BJRI Annual Report	2010-11
31.	Investigation on the leaf yellowing and leaf curling diseases of kenaf.	BJRI Annual Report	2010-11
32.	Selection of varieties/accessions of jute due to leaf mosaic disease under field condition.	BJRI Annual Report	2010-11
33.	Seed health test and Pathological study of jute, kenaf and mesta seeds for recommendation	BJRI Annual Report	2011-12
34.	Screening for resistant materials of <i>Macrophomina phaseolina</i> under controlled condition.	BJRI Annual Report	2011-12
35.	Preliminary screening of jute and allied fibre crops against root-knot disease.	BJRI Annual Report	2011-12
36.	Biological control of jute pathogens (Fungi) by different <i>Trichodermae</i> sp.	BJRI Annual Report	2011-12
37.	Integrated management of fungal diseases of jute.	BJRI Annual Report	2011-12
38.	Field evaluation of <i>Trichoderma</i> spp. for controlling soil borne fungal diseases of jute.	BJRI Annual Report	2011-12
39.	Assessment of yield loss due to leaf curling and leaf yellowing of kenaf.	BJRI Annual Report	2011-12
40.	Survey of diseases of jute and allied fibre crops.	BJRI Annual Report	2011-12
41.	Training on management approaches of newly appeared pests and diseases of jute, kenaf and mesta	BJRI Annual Report	2011-12

42.	Genome sequence of Tossa jute (O-4)	BARJ- Annual Report	2011-12
43.	Genome sequence of <i>Macrophomina phaseolina</i> MS6	BARJ- Annual Report	2013-14
44.	Standardization of mutagen (EMS-Ethyl methane sulfonate) Lethal dose (LD50)for Capsularis (CVL-1, CBS-718) and olitorius (O-9897) jute in lab and field conditions.	BARJ- Annual Report	2013-14
45.	Screening of useful mutants through chemical mutagenesis for variety development	BARJ- Annual Report	2014-15
46.	Phenotypic microarray of <i>Macrophomina phaseolina</i> MS6	BARJ- Annual Report	2014-15
47.	Fixation of Tissue culture protocol for efficient genetic transformation in jute.	BARJ- Annual Report	2014-15
48.	Genome sequence of Deshi jute (CVL-1)	BARJ- Annual Report	2015-16
49.	Construction of whole genome optical maps of <i>Macrophomina phaseolina</i> L.	BARJ- Annual Report	2015-16
50.	Characterization of <i>C. olitorius</i> germplasm (a total of 1410 accession)	BARJ- Annual Report	2015-16
51.	Fixation of Tissue culture protocol for efficient genetic transformation in jute.	BARJ- Annual Report	2015-16
52.	Screening of <i>Macrophomina phaseolina</i> MS6 tolerant germplasm from wild genotype of jute	BARJ- Annual Report	2016-17
53.	Chemical mutagenesis for development of day-neutral and <i>Macrophomina phaseolina</i> MS6 tolerant jute genotype.	BARJ- Annual Report	2016-17
54.	Varietal trial (MLT-Multi Location Trial) of BARJ developed advance line (Robi-1,	BARJ- Annual Report	2016-17

	Shoshi-1) at different locations in Bangladesh.		
55.	Chemical mutagenesis for development of day-neutral and <i>Macrophomina phaseolina</i> MS6 tolerant jute genotype	BARJ- Annual Report	2017-18
56.	Development, characterization and stability analyses of EMS derived early flowering, day-neutral capsularis jute genotype (Komola).	BARJ- Annual Report	2017-18
57.	Histochemical and Biochemical (Elemental Analysis, Fourier-transform infrared spectroscopy, ¹ H NMR- Proton Nuclear Magnetic Resonance) analyses of early flowering and day-neutral mutant.	BARJ- Annual Report	2018-19
58.	Production of CELi restriction enzyme from celery plant (<i>Apium graveolens</i> L.) and efficacy assessment in pooled DNA.	BARJ- Annual Report	2018-19
59.	TILLinG (Target Induced Local Genomes) of flowering genes for detection of responsive candidate gene (s) of early flowering and day-neutral mutant.	BARJ- Annual Report	2018-19
60.	Functional genomics of day-neutral and <i>Macrophomina phaseolina</i> MS6 tolerant jute plant	BARJ- Annual Report	2019-20

16. Outstanding achievement:

Sl. No.	Name of Achievement	Year
01.	Genome sequence of Tossa Jute (<i>Corchorus olitorius</i>) O-4	2010
02.	Genome sequence of Jute Stem rot fungus <i>Macrophomina phaseolina</i>	2012
03.	Genome sequence of white Jute (<i>Corchorus capsularis</i>) CVL-1	2013
04.	Genome optical mapping of <i>Macrophomina phaseolina</i>	2013-2014
05.	Genome sequence of Dhaincha (<i>Sesbania sesban</i>)	2018
06.	Development of early flowering, short life-spanned jute (<i>Corchorus</i> spp.) mutant via ethyl methane sulfonate mutagenesis	2019
07.	Development of higher yielding deshi (shoshi-1 and shoshi-2) and	2014-15

	Tossa jute (Robi-1 and robi-2) genotypes	
08.	Identification of (<i>Macrophomina phaseolina</i>) MS6 resistant jute genotype (<i>C. fascicularis</i>)	2013

As team member of the sequence team I did different events i.e., wet lab experiment (DNA, RNA extraction, PCR work, Phenotypic microarray, DNA microarray, whole genome optical mapping of *Macrophomina phaseolina* MS6 and Jute), and bioinformatic analyses like Data annotation, curation etc. In addition, I established efficient tissue culture protocol through direct organogenesis of both species of jute. In my PhD work, I developed a short life span and early flowering advance line which is under consideration for further improvement in context to higher yield all through the year. In Bangladesh, first time I extracted CELi restriction endonuclease enzyme for cleaving the heteroduplex position of EMS (Ethyl Methane Sulfonate) derived mutants. Consequently, PMIR1 (Plastid Movement Impaired 1 related 1) gene was identified using TILLinG (Target Induced Local Lesions in Genomes) approach.

Patent registered:

1. Lignin degrading enzymes from *Macrophomina phaseolina* MS6 and uses thereof.
2. Cellulose and/or hemicelluloses degrading enzymes from *Macrophomina phaseolina* MS6 and uses thereof.
3. Pectin degrading enzymes from *Macrophomina phaseolina* MS6 and uses thereof.

Signature of Applicant:

Address:

Principal Scientific Officer

Molecular Biology Department
Genetic Resources and Seed Division
And
Program Manager (Genomics)
Basic and Applied Research on Jute Project
Bangladesh Jute Research Institute
Manik Miah Avenue, Dhaka-1207

Email: mosaddequebjri@gmail.com
mosaddeque@jutegenome.org