

## Curriculum Vitae of Mohammad Afzal Hossain

### **Personal Information**

Name : Mohammad Afzal Hossain  
Father's Name : Mohammad Sahajuddin Sarker  
Present Address : D-1/14 (Biplob), BRRRI Campus, Gazipur-1701  
Age (11/02/2017) : 34 years 02 months 10 days

### **Education Qualification**

Degree/ Certificate	University/Board	Year of Passing
Master of Science (MS) in Farm Structure	Bangladesh Agricultural University, Mymensingh	2008
Bachelor of Science (BSc.) in Agricultural Engineering	Bangladesh Agricultural University, Mymensingh	2004
Higher Secondary Certificate (HSC) in Science	Dhaka Board, Bangladesh	1999
Secondary School Certificate (SSC) in Science	Dhaka Board, Bangladesh	1997

### **Current Research**

- ✓ Rice storage without chemicals
- ✓ Solar energy use in insect pest management in organic agriculture

### **Research Experience**

1. **Senior Scientific Officer** in Workshop Machinery and Maintenance Division, BRRRI, Gazipur from 16 April 2014 to till date.
2. **Scientific Officer** in Workshop Machinery and Maintenance Division, BRRRI, Gazipur from 12 November 2007 to 15 April 2014.
3. **Working Scientist** of Mujibnagar Integrated Agricultural Development Project of BRRRI part, in Jinedah District.

### **Other Experiences**

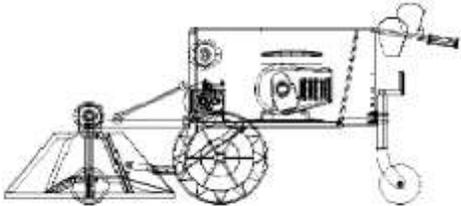
1. **Prepared and delivered lectures** for graduate and undergraduate courses at Civil Engineering Department in Royal Institute of Technology (RIT), Gazipur for one and half years.
2. **Article Writing:** "Technique of Post harvest losses of Rice, Hybrid rice and seed production, Causes of sterility on Boro rice, খাদ্য ঘাটতি মোকাবেলায় পরিবেশবান্ধব ধান চাষ, পরিবর্তিত জলবায়ু মোকাবেলায় ধান গবেষণা and BRRRI field mower" have published in the reputed national dailies, Bangladesh.
3. **Evaluator:** Act as a member of tender opening and evaluation committee.

4. **Training:** Successfully completed trainings on Application Software's for Agricultural Research, Research Methodology, On farm research methodology, Rice Production, Communication and Office Management, Foundation Training Course for NARS Scientists etc.
5. **Radio Programme on** “গুটি ইউরিয়া প্রয়োগযন্ত্রের কার্যকারিতা”, “বোরো ধানে সেচ ব্যবস্থা”, “কৃষি যন্ত্রপাতি রক্ষনাবেক্ষণ কৌশল”, “ধানের উৎপাদন বাড়াতে কৃষি যন্ত্রের ব্যবহার”, “ধান কর্তোনোত্তর অপচয় কমানোর কৌশল” etc. broadcasted in “Krishi Bisayak Karjakram”, program, Bangladesh Betar, Sherebangla Nagar, Dhaka-1207.
6. **Book Review:** Changing Rural Economy of Bangladesh. Edited by M. A. Sattar Mandal and Published by Bangladesh Economic Association, Dhaka- 1205, Bangladesh

### **Contribution in technology generation**

#### **As Principal Investigator**

Name of the Program	Photograph	How country/farmers/user will be benefited
Feasibility study of solar energy use in agricultural machinery		Stored energy was used in winnowing paddy at BIRRI threshing yard. In other time this energy used as illumination of four bulbs of each 15 W at BIRRI automobile workshop. 600-800 kg paddy can be cleaned in an hour.
Design and development of a PT operated grain cleaner		Air flow rate was found 7 m/s at a linear distance of 1 m and it is decreased to 3 m/s at 5 m from center of flywheel. No foreign matter was observed in cleaned grain during operation. Farmers are also using this type cleaner without safety cover which is very risky. 1200-1600 kg paddy can be cleaned in an hour. Male or female can use this easily.

Name of the Program	Photograph	How country/farmers/user will be benefited
Test and modification of existing tractor mounted scrapper		<p>The tractor mounted scrapper can be operated easily with the ordinary tractor. It levels soil well. Leveled field also facilitate the smooth operation of agricultural machines. Leveled field receives uniform penetration of irrigation water with high efficiency. The possibility of water logging and soil erosion is reduced.</p>
Study on Cone penetration resistance of Rice bed soil	<p>The in-situ cone penetration resistance of BRR1 west byed (clay loam) soil was determined by a proving ring cone penetrometer. The cone penetration resistances of clay loam soil were found from 347.05 to 5605 kN/cc depending on moisture content, bulk density etc. For rice bed (clay loam) soil, the minimum cone penetration resistance was found at 22.2% moisture content.</p>	<p>Cone penetration resistance-dry density-moisture content relationship in 3-D space was developed for a particular soil which enables one to make practical use of the cone penetrometer test for soil compaction related studies.</p>
Comparative study on different field mowers'		<p>The average field capacity and field efficiency of the mower were 0.243 ha/hr and 87% respectively. The cutting blade diameter was 80 cm. The forward speed of the field mower was 3.3 km/hr. The cutting height of grass ranged from 4 to 6 cm from the ground surface. The fuel consumption ranged from 0.50 to 0.70 l/hr.</p>

### As Co-Principal Investigator

Name of the Program	Photograph	How country/farmers/user will be benefited
Modification of reaper travelling wheel for wet-land condition	 <p>Wet land suited reaper travelling wheel</p>	<p>Reaper can be operated wet land as well as dry land.</p>

Name of the Program	Photograph	How country/farmers/user will be benefited
Design, development, and introduction of self-propelled reaper to augment crop production	<p>Aa</p>  <p>Actual view of BRRi developed self-propelled reaper</p>	It will to adopt the mechanical harvesting so that the timeliness in harvesting operation could be ensured and field losses are minimized to increase yield and land productivity. This will also allow the land to be prepared for the subsequent crops.
Database development for repair and maintenance of BRRi's farm machineries and automobiles.		Database will help to record, update information about repair and maintenance of vehicles and farm machineries of BRRi and present the desire data according to the requirement.

## Publications

### A) full paper

- **Principal Author-03**

1. **Hossain MA**, Kabir S, Islam MN, Haque MA, and Islam MT, 2009. Processing of green mango by drying and pickling. *Eco-Friendly Agricultural Journal* 2(2): 401-405.
2. **Hossain MA**, Zami MA, Mamun MAA, Islam SMM, Biswas BK, 2009. Cone penetration resistance of BRRi Rice bed soil. *International Journal of Bio Research* 6(2):40-45.
3. **Mohammad Afzal Hossain**, Md. Abdul Awal, Md. Rostom Ali, and Md. Monjurul Alam, 2017. Popularizing Moisture Meter as a Tool to Post-harvest Loss Reduction of Rice. *Progressive Agriculture* 28(1): (Accepted for publication).

• full paper as **Co- Author-12**

1. Zami M A, Hossain M Altaf, Sayed, M. A, Biswas B K and. **Hossain M A**, 2014. Performance Evaluation of the BRRI Reaper and Chinese Reaper Compared to Manual Harvesting of Rice (*Oryza sativa* L.), *The Agriculturists* 12(2):142-15.
2. Hossain M S, Ashrafuzzaman M, Iqbal M, **Hossain M A** and Hoque M F, 2014. A Survey on Poultry Litter Management System in different Poultry Farms of Bangladesh, *International Journal of Bio Research* 16(1): 37-43.
3. Abu Sayed, Saleh A. F. M, Hossain M. Altaf, Basunia Z A and **Hossain M A**, 2014. Impact of Lined Canal on Shallow Tubewell Irrigation and Their Acceptability by the Farmers, *The Agriculturists*12(2): 116-125.
4. Ahmed T, **Hossain M A**, Sayed MA, Wasit S and Hossain M, 2014. Preparation of Jelly and Chutney from Sapota (*Achras zapota*), *International Journal of Bio Research* 16(1):7-14.
5. MA Hossen, **Hossain M A**, MA Alam, S Paul and AKML Rahman, 2015. Development and evaluation of an appropriate power weeder for Bangladesh. *The Agriculturists* (accepted for publication)
6. Hossain M B, **Hossain M A**, Nath B C, 2013. Feasibility study of Motor and engine driven open drum power thresher. *Eco-Friendly Agricultural Journal* 6(05): 83-92.
7. Mamun MAA, Halder KP, Monir MR, **Hossain MA**, Alam MZ and Akter N, 2011. Effect of harvesting time on seed quality of BRRI dhan29. *Eco-Friendly Agricultural Journal* 4(02): 546-549.
8. Ahmed T, Burhanuddin M, Hoque M A, **Hossain M A**, 2011. Preparation of Jam from Sapota (*Achras zapota*), *The Agriculturists* 9(1&2): 1-7.
9. Hasan SMK, **Hossain MA**, Hossain MJ, Roy J, and Sarker MSH, 2010. Preparation of Biscuit from Jackfruit *Artocarpus Heterophyllus* seed flour Blended with Wheat flour, *The Agriculturists* 8(1): 10-18.
10. Helal Uddin M, Islam MM, Mandal MSN, **Hossain MA**, and Rabbi SMHA, 2010. Performance of Two BRRI Varieties of Boro Rice as influenced by Poultry Manure Based Integrated Fertilizer Management, *The Agriculturists* 8(1): 38-46.
11. Rahman MS, Islam MT, **Hossain MA**, Alam MA, and Mridha AJ, 2010. Command Area Development of Shallow tube well by providing different conveyance system, *International Journal of Bio Research* 8(3): 15-21.
12. Haque MA, **Hosain MA**, Rashid KMM, Wasit S and Islam MN, 2009. Study on the effect of vegetable powder on instant fish soup mix, *Eco-Friendly Agricultural Journal* 2(4): 526-530.

## **B) Bulletins-02**

1. MA Zami, BK Biswas, MAI H , **MA Hossain**, MA Syeed (2013). "BRRI Self-propelled reaper", Bangladesh Rice Research institute, Gazipur, Bangladesh.
2. MA Zami, BK Biswas, MAI H , **MA Hossain**, Md Kamrul Islam (2013). "Introduction of a newly developed Self-propelled reaper to augment crop production", Bangladesh Rice Research institute, Gazipur, Bangladesh.

## **c) List of International Conference-05**

- i. **M. A. Hossain**, M. A. Awal, M. R. Ali and M. M. Alam. Moisture Meter Use- A Key to Post-harvest Loss Reduction of Paddy. 7th *International Seminar of Regional Network on Poverty Eradication (RENPER7)*, 13-15 November 2016, Bangladesh Agricultural University, Mymensingh-2202. **Bangladesh**
- ii. M. R. Ali, **M. A. Hossain**, M. A. Awal and M. M. Alam. Assessment of Different Paddy Storage Technologies at Farm Households in Bangladesh. *ASABE 2016, Annual International Meeting*, July 17-20, 2016, Orlando, Florida, **USA**.
- iii. M. A. Awal, **M. A. Hossain**, M. R. Ali and M. M. Alam. Effect of Storage Structures on Paddy Seed Quality in Bangladesh. *ASABE 2016, Annual International Meeting*, July 17-20, 2016, Orlando, Florida, **USA**.
- iv. M. M. Alam, M. A. Ali, M. A. Awal, C. K. Saha, M. R. Ali, M. A. Momin, S. Begum. M. A. Alam, **M. A. Hossain** and A. F. Zahan. Post Harvest Technologies of Paddy in Bangladesh. *ASABE 2016, Annual International Meeting*, July 17-20, 2016, Orlando, Florida, **USA**.
- v. M. A. Awal, **M. A. Hossain**, M. R. Ali and M. M. Alam. Effective Rice Storage Technologies for Smallholding Farmers of Bangladesh. *The First International Congress on Postharvest Loss Prevention*, Rome, **Italy**. October 4-7, 2015.

## **D) Leaflet-01**

**Hossain, M. A.**, Awal, M. A., Ali, M. R, and Alam M. M., 2016. Rice storage in hermetic bag, PHLIL-Storage Component, BD

## **E) Festoon-01**

Alam M. M, **Hossain, M. A.**, Awal, and M. A., Ali, M. R, 2015. Use of hermetic bag in rice storage and its benefits', PHLIL-Storage Component, BD

## **F) Abstract-03**

- i. **M A Hossain**, B K Biswas and M A Zami, 2014. Cone penetration resistance of BRRI farm soil
- ii. B K Biswas, **M A Hossain** and M A Zami, 2014. Paddy yield as influenced by different tillage depths
- iii. M A Zami, B K Biswas and **M A Hossain**, 2014. Design and Develop a Self-propelled Reaper with Simple Power Transmission Gearbox