CURRICULUM VITAE OF
SUBRATA PAUL

MAILING ADDRESS

Engr. Subrata Paul
Senior Scientific officer (SSO)
Farm Machinery and Postharvest Technology (FMPHT), Division
Bangladesh Rice Research Institute (BRRI)
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PERSONAL DETAILS

Name	:	Subrata Paul
Father's name	:	Suvash Chandra Paul
Mother's name	:	Protima Paul
Date of birth	:	20th December 1980
Place of birth	:	Gazipur
Nationality	:	Bangladeshi (by birth)
Permanent address	:	Village: Bashon (14 No. Ward), Post Office: Kadda Bazar, P.S: Bashon, Upazilla: Gazipur Sadar, Gazipur City Corporation, District-Gazipur
Marital status	:	Married
Sex	:	Male
Blood Group	:	A Positive (A+)
Religion	:	Sanaton (Hindu).

EDUCATIONAL QUALIFICATION

Name of the Degree	Institution/University	Year of Passing
Master of Engineering in Environmental Engineering	Bangladesh University of Engineering and Technology (BUET), Dhaka	2008
B. Sc. in Agricultural Engineering	Bangladesh Agricultural University (BAU), Mymensingh	2003 (held in 2005)
H.S.C (Higher Secondary Certificate)	Govt. Bhawal Badre Alam College, Dhaka Board	1998
S.S.C (Secondary School Certificate)	Bashon Taijuddin High School, Dhaka Board	1996

EMPLOYMENT HISTORY

Name of the Institute	Name of the post	Tenure of Service		Service Length	Objective/ activities
		Form	To		
Bangladesh Rice Research Institute (BRRI)	Senior Scientific Officer	15/12/2014	Till	-	**Responsibilities:** Design, development, modification, and test of the rice farm machinery; Research on farm machinery, and postharvest technology; Extension, and dissemination of farm machinery, and postharvest technology to the end-user of Bangladesh. **Regular activities:** i) Research program development, design, setup, and execution; ii) Data collection, analysis, and report writing; iii) Research activities supervision and management; iv) Farmer training and technical support; v) Office Administration, farm and financial management.
Bangladesh Rice Research Institute (BRRI)	Scientific Officer	20 August, 2009	14/12/2014	5 yr. 3 month	**Responsibilities:** Design, development, modification, and test of the rice farm machinery; Research on farm machinery, and postharvest technology; Extension, and dissemination of farm machinery, and postharvest technology to the end-user of Bangladesh. **Regular activities:** i) Research program development, design, setup, and execution; ii) Data collection, analysis, and report writing; iii) Research activities supervision and management; iv) Farmer training and technical support; v) Office Administration, farm and financial management.

Department of Agriculture Extension (DAE), Ministry of Agriculture	Agricultural Engineer	10 March,2008	16 August, 2009	17 Months	• Introduction of Agricultural Machinery viz. Power tiller, Reaper, Thresher, Drier to the farmers' level. • Extension of Drip, Hand shower and Buried pipe irrigation application method in the field. • Demonstration of irrigation technology like Pre-cast concrete channel, improved earthen canal • Dissemination of water saving technology i.e., Alternate Wetting and Drying (AWD) method. • Organizing farmers training, Field Day, Rally, Agricultural Engineering technology fair, and Workshop

PERSONAL SKILL AND COMPETENCE

Language proficiency:

Mother tongue: Bengali

Another language: English

Social and organizational skill and competence:

1. Member, Institution of Engineers, Bangladesh (**IEB**); Membership no: M / 26068
2. Member, Bangladesh Society of Agricultural Engineers (**BSAE**);
3. Krishibid Institution, Bangladesh (KIB).;
4. Founder member, **ANKUR** (a cultural organization of Bangladesh Agricultural University)
5. Bangladesh Rice Research Institute Scientist's Association (BRRISA)

Computer skills and competence:

1. Competent in Microsoft Operating Systems and Microsoft Office package
2. Familiar software: Operating software Windows-7, Windows-98, Windows-XP and Arc view (GIS),
3. Basic Knowledge of Hardware and competent in using the internet
4. AutoCAD Engineering drawing tools and CADRA Engineering drawing tools, Solid works Engineering drawing tools and MasterCAM

PROJECT WORKS

- Carried out nine months of project work under Prof. Dr. Md. Nurul Islam, Department of Food Technology and Rural Industries, Bangladesh Agricultural University, Mymensingh entitled "**Availability of Nutrient and Arsenic content of selected Vegetables**".
- Worked as a project scientist at Development of Research Capacity of the Bangladesh Rice Research Institute (DRCB) Project: Executed the project work as principal investigator entitled "**Development of Manual Carrier".** The project was executed in the BRRI research field and funded by KOICA
- Worked as a project scientist on the "Farm Machinery Technology Development and Dissemination" project**.** The project was executed in twelve districts and funded by GOB.
- Worked as a project scientist at the "Integrated Agriculture Productivity" project**.** The project was executed in Barisal & Rangpur region
- Worked as project scientist (Co-Investigator) on **"Improvement and Validation of BRRI Developed Head Feed Mini Combine Harvester (IVBDCH), PIU-BARC, NATP-2 Bangladesh Agricultural Research Council (BARC).**
- Worked as a project scientist (Co-Investigator) **"Validation of BRRI Develop Solar Light Trap (VBDLT)"** project
- Working as working personnel on the **"Strengthening Farm Machinery Research Activity for Mechanized Rice Cultivation (SFMRA)"** project
- Working as project scientist (Co-Investigator) on the **Validation and Up-scaling of Rice Transplanting and Harvesting Technology in the Selected Sites of Bangladesh" project.** Comparative Grants Program (CGP), Interim-2,2021 Research Project under KGF-BKGET Found.

MASTER OF ENGINEERING THESIS

- Carried out six Credit thesis work under the guidance of Prof. Dr. Md. Delwar Hossain, Department of Civil Engineering, Bangladesh University of Engineering and Technology (BUET), Dhaka entitled '**Approaches to Restore Water Quality of the Buriganga River**'.

SCIENTIFIC PUBLICATION(S)

Full paper as Principal Author (National/International Journal)

National Journal:

1. **Subrata Paul,** M Kamruzzaman, MIM Akhand, R Barua, N Parvin and S Hosen. **POLLUTION SCENARIO AND POSSIBLE REMEDIAL MEASURES OF THE BURIGANGA RIVER OF BANGLADESH.** Eco-friendly Agril. **J.** 6(12): 257-264, 2013 (December).

2. **Paul Subrata,** Hossain Delwar, Mahmud MNH, Paul PLC, Rahman AKML, Saha MK. **QUALITY DEGRADATION TREND OF WATER IN THE BURIGANGA RIVER.** BANGLADESH JOURNAL OF PROGRESSIVE SCIENCE & TECHNOLOGY (BJPST). BJPST: 12(1):011-016 [January, 2014] ISSN: 2305-1809 (Online version).

3. **S. Paul,** M.A. Hossen, B.C. Nath, M.A.Rahman and S. Hosen. **EFFECT OF SOIL SETTLING PERIOD ON PERFORMANCE OF RICE TRANSPLANTER.** INTERNATIONAL JOURNAL OF SUSTAINABLE AGRICULTURAL TECHNOLOGY (IJSAT). ISSN 1815-1272, Volume 12 (11): 14-20, November 2016 (An Online Journal).

4. **S Paul, A** Akhter, BC Nath, M D Huda, MGK Bhuiyan, H Paul, S Islam. **"NUTRITIONAL ELEMENTS ASSESSMENT IN SELECTED TRADITIONAL LOCAL VEGETABLES**" Journal of Agricultural Engineering. The Institute of Engineers, Bangladesh, Vol. 43/AE Number 1, August, 2020. (***Accepted by*** *Journal of Agricultural Engineering. The Institute of Engineers, Bangladesh, Vol. 43/AE on 27 July 2020 under process to publish*)**.**

International Journal:

1. **Subrata Paul**, Mohammad Abdur Rahman, Bidhan Chandra Nath, Anwar Hossen, A. K. M. Saiful Islam, M. Kamruzzaman Milon, M. Kamruzzaman Pintu. "**DESIGN AND DEVELOPMENT OF A PRILLED UREA APPLICATOR"** Journal of Scientific Research Publishing "Agricultural Sciences" 2021, 12, 530-548 https://www.scirp.org/journal/as ISSN Online: 2156-8561 ISSN Print: 2156-8553, DOI: 10.4236/as.2021.125034 May 20, 2021 (Received: March 29, 2021; Accepted: May 17, 2021; Published: May 20, 2021)

2. **Subrata Paul,** Bidhan Chandra Nath, Md Durrul Huda, Haimonti Paul, Md Mizanur Rahman, and Sharmin Islam. "**An Improved Rickshaw Van with Added Two-Speed Gear, Suspension, and Foot Wooden Brake"** UIJRT | United International Journal for Research & Technology | Volume 03, Issue 12, 2022 | ISSN: 2582-6832

Full paper as Co-author

(National/International Journal)

National Journal:

1. M Hossain, M A Mojid, P L C Paul and **S Paul. MEASUREMENT OF CONVEYANCE LOSS OF WATER IN IRRIGATION CANALS IN SADAR UPAZILLA, MYMENSINGH**. Eco-friendly Agril. J.5(07):79-85,2012 (July).

2. M K Saha, M M Alam, **S Paul,** B P Ray and R R Sarker. **PESTICIDES EFFECT ON MORTALITY OF TILAPIA FISH** (Oreochromis niloticus). Eco-friendly Agril. J.5(12): 242-247,2012 (December).

3. AKML Rahman**, S Paul,** S Hossen, M B Uddin and M A Alam. **STUDY ON THE SHELF-LIFE OF PINEAPPLE PRESERVES AND CANDIES.** Eco-friendly Agril. J**.**5(12):289-296,2012 (December).

4. MIM Akhand, BC Roy, JC Biswas, N Parvin, and **S Paul. UREA SPRAYING AS AN EFFECTIVE ALTERNATE METHOD OF NITROGEN MANAGEMENT**. Eco-friendly Agril. J**.**6(09):188-192,2013 (September).

5. P L C Paul, N Hasan, M A Rashid, M Paul, and **S Paul**. **WATER PRODUCTIVITY EVALUATION FOR RICE BASED CROPPING SYSTEM IN GAZIPUR DISTRICT OF BANGLADESH.** Eco-friendly Agril. J**.**6(12):279-284, 2013 (December).

6. Kamruzzaman M, Awal MA, Hossen MA, **Paul S**, Nath BC, Islam MA. **PROTECTION OF SEEDLING IN TRAY FOR MECHANICAL RICE TRANSPLANTING FROM EFFECT OF COLD WEATHER USING POLYTHENE SHED.** BANGLADESH JOURNAL OF PROGRESSIVE SCIENCE & TECHNOLOGY (BJPST). BJPST: 12(1):005-010 [January, 2014]. ISSN: 2305-1809 (Online version).

7. R Barua,M N Islam**,** A Zahan**, S Paul** and Shamsunnaher**. EFFECTS OF SPACING AND NUMBER OF SEEDLINGS HILL-1 ON THE YIELD AND YIELD COMPONENTS OF BRRI dhan47.** Eco-friendly Agril. J. 7(06): 65-68, 2014 (June).

8. Al-Mamun, N Parvin, S Razia, S D Joya and **S Paul. ORGANOGENESIS OF *DENDROBIUM* ORCHID WITH ORGANIC SUPPLEMENTATIONS AND SUGAR**. Eco-friendly Agril. J. 7(07): 69-75, 2014 (July).

9. Kundu A, Alam MM, Saha MK, **Paul S**, Nath BC, Mondal SC. **DESIGN AND DEVELOPMENT OF MANUALLY OPERATED PULL TYPE FOUR ROWS UREA SUPER GRANULE (USG) APPLICATOR. BANGLADESH JOURNAL OF PROGRESSIVE SCIENCE & TECHNOLOGY (BJPST).** BJPST: 13(1):017-022 [January 2015]. ISSN: 2305-1809 (Online version).

10. MA Hossen, MA Alam, **S Paul**, and MA Hossain. **Modification and evaluation of a power weeder for Bangladesh condition.** Eco-friendly Agril. J. 8(03): 37-46, 2015 (March).

11. B C Nath, M A Hossen, A K M S Islam, M D Huda, **S Paul,** M A Rahman. Postharvest Loss **Assessment of Rice at Selected Areas of Gazipur District.** Bangladesh Rice Journal 20(1):23-32, 2016.

12. M S Yesmin, F Nowrin, A Chowdhury, **S Paul,** and MM Islam. **PERFORMANCE EVALUATION OF A SOLAR POND.** Eco-friendly Agril. J. 11(10):114-118, 2018 (October).

13. M D Huda, B C Nath, **S Paul**, M G K Bhuiyan, S Islam, M M Islam. **DESIGN AND DEVELOPMENT OF A HEAD FEED MINI COMBINE HARVESTER SUITABLE IN BANGLADESH CONDITIONS.** Journal of Agricultural Engineering. The Institute of Engineers, Bangladesh, Vol. 42/AE Number 3, Page: 73-92, September 2019.

14. H Paul, **S Paul,** M A Hossen, M D Huda, S Islam, M G K Bhuiyan, B C Nath, M A Rahman. **PERFORMANCE EVALUATION OF POWER-OPERATED AUTOMATIC SEED SOWER MACHINE OF MAT-TYPE RICE SEEDLING RAISING**. Journal of Agricultural Engineering. The Institute of Engineers, Bangladesh, Vol. 42/AE Number 3, Page: 69-77, November 2019.

15. S Islam, H Paul, F Akter, M G K Bhuiyan, S **Paul. PERFORMANCE EVALUATION OF A DEEP TUBEWELL IRRIGATION SCHEME: A CASE STUDY IN SUTIAKHALI OF MYMENSINGH DISTRICT.** Journal of Agricultural Engineering. The Institute of Engineers, Bangladesh, Vol. 42/AE Number 3, Page: 63-68, November 2019.

16. H Paul, M A Hossen, S Islam, **S Paul,** M G K Bhuiyan. **EVALUATION OF BRRI MULTI-ROWS POWER WEEDER: A CASE STUDY UNDER SILTY LOAM SOIL AT SADAR, GAZIPUR.** Journal of Agricultural Engineering. The Institute of Engineers, Bangladesh, Vol. 42/AE number 4, Page: 77-83, December 2019.

17. H Paul, B C Nath, M G K Bhuiyan, **S Paul**, S Islam, M D Huda, H B Shozib. **EFFECT OF DEGREE OF MILLING ON RICE GRAIN QUALITY.** Journal of Agricultural Engineering. The Institute of Engineers, Bangladesh, Vol. 42/AE number 4, Page: 69-76, December 2019.

International Journal:

1. Bidhan Chandra Nath, Yo-Sang Nam, Md. Durrul Huda, Md. Mizanur Rahman, Panna Ali, **Subrata Paul.** "**Status and Constrain for Mechanization of Rice Harvesting System in Bangladesh".** Agricultural Sciences, 8, 492-506 http://www.scirp.org/journal/as ISSN Online: 2156-8561 ISSN Print: 2156-8553, June, 2017.

2. Anwar Hossen; Ruhul Amin Talukder; Rashed Al Mamun; Hafizur Rahman; **Subrata Paul;** Mizanur Rahman; M Miaruddin; Azhar Ali; Nurul Islam. "**Mechanization status, promotional activities and government strategies, of Thailand and Vietnam in compare with Bangladesh."** An Open Access Journal by MDPI, Basel, Switzerland, September 2020. (Accepted in Agri Engineering (ISSN 2624-7402) on 19 September 2020.)

3. Md. Mizanur Rahman, Bidhan Chandra Nath, **Subrata Paul,** Md. Golam Kibria Bhuiyan, Md Panna Ali, Hafijur Rahaman, Md. Durrul Huda, Mohammad Abdur Rahman "**Design and Development of BRRI Solar Powered Light Trap"** International Journal of Innovative Technology and Exploring Engineering (IJITEE) ISSN: 2278-3075 (Online), Volume-11 Issue-2, December 2021

4. Nath, B.C., **Paul,S.,** Huda, M.D., Hossen, M.A., Bhuiyan, MGK and Islam, AKM S. (2022) "**Combine Harvester: Small Machine Solves Big Rice Harvesting Problem of Bangladesh."** Agricultural Sciences, 13, 201-220. https://www.scirp.org/journal/as ISSN Online: 2156-8561ISSN Print: 2156-8553, DOI: 10.4236/as.2022.132015 Feb. 16, 2022

Workshop paper:

1. M.A. Rahman, M.S. Islam; M.A. Hossen; B.C. Nath and **S. Paul.** (2010). **"Improved Processing Technology of Export Quality Aromatic Rice BRRI dhan50",** Paper presented in the International Exhibition & Seminar on Rice Processing Technology Organized by RICE TECH EXPO, Bangladesh at Basundhara Convention Center 2, Baridhara, Dhaka.

2. MA Rahman, **S Paul,** B C Nath and AKM S Islam. **AN OVERVIEW OF RICE STORAGE SCENARIO AT HOUSEHOLD LEVEL IN BANGLADESH**. Paper presented in the "Regional workshop on Improving Grain Storage at Household level for Food Security in Rural Areas", 2 Aril 2013, CIRDAP

Books/Bulletins/Booklets/ Leaflets

a) Book Chapter:

1. **Name:** Study on Agricultural Machinery for Bangladesh, Published by Korean International Cooperation Agency (KOICA), South Korea
   Chapter-V: Development of the Manual Carrier

   Written by **Engr. Subrata Paul,** Scientific Officer, FMPHT Division, BRRI

   Supervised by Eui Han Kim, Engineering Specialist, KDS.

2. **Name:** Essential Steps for Developing Rice Harvest Mechanization in Bangladesh
   Chapter-11: Print ISBN: 978-93-90768-13-4, eBook ISBN: 978-93-90768-17-2, DOI: 10.9734/bpi/cras/v7/1535F

   Written by: Bidhan Chandra Nath, Md. Durrul Huda, Md. Mizanur Rahman and **Subrata Paul**

b) Booklets as Co-author:

1. M D Huda, B C Nath, **S Paul,** M G K Bhuiyan, and S Islam (2018). ***Booklet On Operation, Repair And Maintenance Of BRRI Head Feed Combine Harvester*** **(ব্রি-হেডফিড কম্বাইন হারভেস্টার পরিচালনা ও রক্ষণাবেক্ষণ নির্দেশিকা),** Farm Machinery and Post-Harvest Technology Division, Bangladesh Rice Research Institute, Gazipur, Bangladesh.

2. M G K Bhuiyan, B C Nath, M P Ali, M M Rahman, **S Paul,** M D Huda, and M A Rahman (2018). ***Booklet on BRRI Solar Light Trap*** **(ব্রি সৌরশক্তি চালিত আলোক ফাঁদ),** Farm Machinery and Post-Harvest Technology Division, Bangladesh Rice Research Institute, Gazipur, Bangladesh.

3. MA Rahman, AKM S. Islam, M.A. Hossen and **S. Paul** (2012). Booklet on **ব্রি উদ্ভাবিত ধান-গম মাড়াই যন্ত্র চালনা ও রক্ষণাবেক্ষণ নির্দেশিকা,** Farm Machinery and Post-Harvest Technology Division, Bangladesh Rice Research Institute, Gazipur, Bangladesh.

4. B.C. Nath, MA Rahman, AKM S. Islam, **S. Paul** and MAA Mamun. (2011). Booklet on **রাইস ট্রান্সপ্লান্টারের জন্য চারা তৈরির পদ্ধতি,** Farm Machinery and Post-Harvest Technology Division, Bangladesh Rice Research Institute, Gazipur, Bangladesh.

5. M.A. Rahman; M.D. Huda; A.K.M.S.Islam; M.G.K.Bhuiyan; M.A. Hossen; B. C, Nath; M.K. Milon; **S. Paul;** A.K.M.L.R. Azad; M.A. Alam and M.K.Pintu.(2014), Introduction of BRRI developed Farm Machinery and Technology ***(ব্রি কৃষিযন্ত্র ও প্রযুক্তি পরিচিতি)***. Published under FMTD project, Farm Machinery, and Postharvest Technology Division, BRRI, Gazipur.

6. M.A. Rahman; M.D. Huda; A.K.M.S.Islam; M.G.K.Bhuiyan; M.A. Hossen; B. C, Nath; M.K. Milon; **S. Paul;** A.K.M.L.R. Azad; M.A. Alam and M.K.Pintu.(2015), Introduction of BRRI developed Farm Machinery and Technology ***(ব্রি কৃষিযন্ত্র ও প্রযুক্তি পরিচিতি)***. Published under FMTD project, Farm Machinery, and Postharvest Technology Division, BRRI, Gazipur.

c) Bulletins as Co-author:

1. B C Nath, M D Huda, MGK Bhuiyan and **S Paul** (2018). ***Brochure on ব্রি উদ্ভাবিত মিনি কম্বাইন হারভেস্টার চালনা ও রক্ষণাবেক্ষণ নির্দেশিকা.*** Farm Machinery and Postharvest Technology Division, Bangladesh Rice Research Institute, Gazipur, Bangladesh.

2. M G K Bhuiyan, B C Nath, M P Ali, M M Rahman, **S Paul,** M D Huda, and M A Rahman (2018). ***Brochure on BRR SOLAR LIGHT TRAP* (ব্রি সৌরশক্তি চালিত আলোক ফাঁদ),** Farm Machinery and Postharvest Technology Division, Bangladesh Rice Research Institute, Gazipur, Bangladesh.

3. M.A. Rahman, M.Kamruzzam (Pintu), M.Kamruzzam Milon, M G K Bhuiyan, AKM Saiful Islam, Subrata Paul, Kamrul Islam (2015). ***Brochure on ব্রি দানাদার ইউরিয়া প্রয়োগযন্ত্র.*** Farm Machinery and Postharvest Technology Division, Bangladesh Rice Research Institute, Gazipur, Bangladesh.

4. M.A. Rahman, B.C. Nath, M.A. Hossen, AKM S. Islam and **S. Paul.** (2011). ***Brochure on IMPROVED PROCESSING TECHNOLOGY OF LONG GRAIN AROMATIC RICE.*** Farm Machinery and Postharvest Technology Division, Bangladesh Rice Research Institute, Gazipur, Bangladesh.

5. M.A. Rahman, B.C. Nath, M.A. Hossen, AKM S. Islam and **S. Paul.** (2011). ***Brochure on বাংলামতি চাউলের উন্নত প্রক্রিয়াজতকরণ পদ্ধতি.*** Farm Machinery and Postharvest Technology Division, Bangladesh Rice Research Institute, Gazipur, Bangladesh.

6. M.A. Rahman, M.D. Huda**,** M.A. Hossen, B.C. Nath, **S. Paul,** AKM S. Islam, M.Kamruzzam. (2011). ***Brochure on যান্ত্রিক পদ্ধতিতে রোপণ উপযোগী ধানের চারা উৎপাদন কলাকৈশল.*** Farm Machinery and Postharvest Technology Division, Bangladesh Rice Research Institute, Gazipur, Bangladesh.

7. Dr. H. K. Kim, B.C. Nath, **S. Paul and** AKML Rahman. (2014). ***Brochure on*** *হস্তচালিত পরিবাহকের নতুন সংযোজন*, Farm Machinery and Postharvest Technology Division, Bangladesh Rice Research Institute, Gazipur, Bangladesh.

Seminar/Workshop/Symposium/ Proceedings/popular articles/Abstract) :(International/ National)

a) Seminar: 01 (One)

1. **Subrata Paul**, M A Satter Gazi, Runa Laila, M Mominul Haque, Sharmin Islam. **COUNTRY REPORT ON BANGLADESH.** The report presented in the **"**Official Seminar on Agricultural Mechanization for Developing Countries" CAAMS, Beijing, China. 9th August, 2016.

b) Workshop paper: 02 (Two)

1. M.A. Rahman, M.S. Islam; M.A. Hossen; B.C. Nath and **S. Paul.** (2010). **"Improved Processing Technology of Export Quality Aromatic Rice BRRI dhan50",** Paper presented in the International Exhibition & Seminar on Rice Processing Technology Organized by RICE TECH EXPO, Bangladesh at Basundhara Convention Center 2, Baridhara, Dhaka.

2. MA Rahman, **S Paul,** B C Nath and AKM S Islam. **AN OVERVIEW OF RICE STORAGE SCENARIO AT HOUSEHOLD LEVEL IN BANGLADESH**. Paper presented in the "Regional workshop on Improving Grain Storage at Household level for Food Security in Rural Areas", 2 April 2013, CIRDAP.

c) Popular article: 02 (Two)

As Principal Author:

1. **Subrata Paul** and AKM Lutfor Rahman **(2014). পণ্য পরিবহনে** হস্তচালিত নতুন কিছু যন্ত্রপাতি. Article published in "দৈনিক যায়যায়দিন". **১৫ জুন ২০১৪, রোববার, কৃষি সংবাদ, কৃষি ও সম্ভাবনা, পৃ. ১৩**

As Co-principal Author:

1. Bidhan Chandra Nath and **Subrata Paul (2015). ব্রি খড় কাটার যন্ত্র.** Article published in "দৈনিক যায়যায়দিন". **১৪ জুন ২০১৫, রোববার, কৃষি সংবাদ, কৃষি ও সম্ভাবনা, পৃ. ১১.**

d) Abstract

1. B. C. Nath, G. Chen, M.A. Mazid, **S.Paul,** M.G.K. Bhuiyan, M.A. Hossen, M.M.Rahman and M.D. Huda(2018). Lower Degrees of Milling Embed Food and Nutrition Security in Bangladesh. Published in 33rd EFFoST International Conference 12-14 November 2019. Postillion Convention Centre, WTC Rotterdam, The Netherlands.

No. of technology developed: (*As Principal Investigator and Co-investigator)*

1. BRRI Prilled Urea Applicator
2. BRRI Air Blow Type Engelberg Huller

3. BRRI Multi Gear Van
4. BRRI Power Straw Chopper
5. Power-operated jute ribboner
6. BRRI Panicle Thresher
7. BRRI Solar Light Trap
8. BRRI Power Weeder
9. Manual Seed Sower Machine
10. BRRI Conical Weeder
11. BRRI Double Row Weeder
12. BRRI Head Feed Combine Harvester
13. BRRI Whole Feed Combine Harvester
14. BRRI Head Feed Thresher

Research Programme as Principal Investigator/Co-investigator

Sl. No	Research programme developed	PI	CI	Year of initiation	Remarks
1	Performance evaluation of direct seeding machine (PTO seeder) for minimum tillage systems	-	CI	2010	Executed
2	Evaluating and modifying of BRRI developed machines	-	CI	2010	Supervised, Continued
3	Test and evaluation of Bokto seeder	-	CI	2010	Supervised, Executed
4	Design and development of a manually operated seeder for upland rice cultivation	-	CI	2010	Executed
5	Milling and processing of premium-quality rice	-	CI	2010	Executed
6	Assessment of physical and engineering properties of BRRI rice	-	CI	2010	Executed
7	Performance evaluation of the power transplanter using seedlings raised in different methods.	-	CI	2011	Supervised, Executed
8	Effect of settling period of soil on the performance of Rice Transplanter	PI		2011	Developed, Supervised, Executed
9	Design and development of a power-operated jute ribboner	-	CI	2011	Developed, Supervised, Executed
10	Development and modification of a winnower	-	CI	2011	Developed, Executed
11	Design and development of a manually and power-operated straw chopper	-	CI	2011	Developed, Executed
12	Effect of ageing on milling performance of premium quality rice	-	CI	2011	Continued
13	Study the performance of IRRI Super bag with traditional bag storage systems for seed quality at farmers field	-	CI	2011	Executed
14	Study the agricultural accident scenario in Bangladesh		CI	2011	Executed
15	Maintenance practice scenarios of agricultural machinery in farms field	-	CI	2011	Executed

16	Study of biogas for farm machinery operations	-	CI	2012	Continued
17	Development of Biomass Stove/Chula	-	CI	2012	Executed
18	Development of hand-operated carrier	PI		2012	Developed, Supervised, Executed
19	Development and evaluation of a power weeder	-	CI	2013	Supervised, Executed
20	Development of an integrated seed-sowing machine	-	CI	2013	Developed, Supervised, Executed
21	Design and development of a head feed power thresher	-	CI	2013	Supervised, Executed
22	Comparative performance of different types of mechanical dryer	-	CI	2013	Executed
23	Design and development of BRRI panicle thresher	-	CI	2014	Developed, Executed
24	Design and development of BRRI prilled urea applicator	-	CI	2014	Developed, Supervised, Executed,
25	Design and development of Single and double-row conical weeder	PI	-	2014	Developed, Supervised, Executed,
26	Design and development of solar dryer	PI	-	2014	Developed, Continued
27	Development of seedling-raising techniques to combat cold temperature		CI	2014	Developed, Executed
28	Field Trial and Demonstration of Promising Farm Machinery and Technology to the LFS Farmers		CI	2014	Executed
29	Development of an inclined plate-type seeder machine		CI	2015	Executed
30	Development of a manual rice transplanter		CI	2015	Continued
31	Design and development of a pull-type granular urea applicator		CI	2015	Executed
32	Comparative study of different types of applicators		CI	2015	Developed, Executed
33	Design and development of Mini Combine harvester		CI	2015	Supervised, Executed
34	Development of a power-operated chopper		CI	2015	Developed, Supervised, Executed
35	Modification of drum seeder		CI	2015	Developed, Executed
36	Improvement of air blow type engelberg huller mill		CI	2015	Supervised, Executed
37	Test and evaluation of Collapsible Dryer		CI	2015	Continued
38	Improvement of rice de-husking and polishing technology		CI	2015	Executed
39	Biogas generation from household waste		CI	2015	Developed, Continued
40	Characterization of different briquettes originated from agricultural residue		CI	2015	Supervised, Executed
41	Development of power operated rice transplanter		CI	2015	Developed, Supervised, Continued
42	Development of manual seed sower machine for raising mat type seedling		CI	2016	Developed, Supervised, Executed

43	Performance evaluation of power operated seed sower machine		CI	2016	Developed, Supervised, Executed
44	Design and development of power weeder		CI	2016	Supervised, Executed
45	Study the milling recovery of long grain rice varieties in commercial mill		CI	2016	Executed
46	Study bio-gas production and storage for commercial use		CI	2016	Developed, Continued
47	Study the briquette production from rice byproduct		CI	2016	Executed
48	Test and modification of reaper binder		CI	2017	Executed
49	Incorporation of prilled urea deep placement mechanism in the rice transplanter		CI	2017	Supervised, Executed
50	Field evaluation of BRRI Prilled urea applicator (BPUA) for long duration rice variety		CI	2017	Developed, Supervised, Executed
51	Effect of drying and tempering on milling recovery of BRRI Variety under different moisture content		CI	2017	Executed
52	Study on Solar Energy Utilization for BRRI Open Drum Thresher and Power Chopper Operation	PI		2017	Developed, Supervised, Continued
53	Design and development of solar powered light trap		CI	2017	Developed, Supervised, Executed
54	Determination of mixing ratio of agricultural byproduct for biogas production		CI	2017	Developed, Supervised, Continued
55	Design and development of inclined plate hill dispensing seeder for direct seeding of rice		CI	2018	Supervised, Continued
56	Test and evaluation of BRRI developed power weeder	PI		2018	Developed, Supervised, Executed
57	Development of power operated rice transplanter		CI	2018	Developed, Supervised, Continued
58	Drying Characteristics and Milling Quality of Premium Quality Rice under various Drying and Tempering Conditions		CI	2018	Supervised, Executed
59	Design and development of a reaper binder		CI	2019	Supervised, Continued
60	Study the effect of polishing on rice grain quality		CI	2019	Supervised, Executed
61	Design and development of a compact rice mill		CI	2019	Continued
62	Design and development of a head feed power thresher	PI		2019	Supervised, Continued
63	Design and development of power operated seed sower machine for raising mat type seedling		CI	2020	Developed, Supervised, Continued
64	Design and development of a medium type head feed type combine harvester		CI	2020	Supervised, Continued
65	Feasibility study of solar energy use in agricultural machinery		CI	2020	Continued

66	Postharvest loss assessment of whole and head feed combine harvester under different soil condition		CI	2021	Continued
67	Effect of different storage structures of milled rice in long-term storage		CI	2021	Continued
68	Identification and fabrication of fast-moving spare parts of combine harvester and rice transplanter enhancing sustainable mechanization in Bangladesh		CI	2022	Continued
69	Design and development of self-propelled fertilizer deep placement applicator	PI		2022	Continued
70	Ground pressure and bearing capacity of combine harvester in different soil conditions		CI	2022	Continued
71	Design and development of a single-row wetland power weeder	PI		2022	Continued
72	Design and development of a self-propelled multi-rows power weeder for both wet and dry land condition		CI	2022	Continued
73	Design and Development of a Rice Transplanter cum Fertilizer Applicator		CI	2022	Continued
74	Improvement and validation of solar energy utilization system for small types of different agricultural machinery	PI		2022	Continued
A total of 74 research program		**10**	**64**		

Others activities and Achievement

1. ***Patent Registered***

   a. **Patent on Prilled Urea Applicator for Rice Field.**

2. ***Radio program***

   a. Participation as Kathak on ধানের আগাছা দমনে ব্রি উইডারের কার্যকারিতা**.** Broadcast under the program of "Krishi Bisayak Karjakram", dated: 01/03/2012, Radio Bangladesh, Sherebangla Nagar-1207.

3. ***Committee members (BRRI Central and divisional)***

   a. Member, Field management committee of FMPHT Division, BRRI, Gazipur-1701 for the period of November 2010 –2013
   b. Member, Receiving committee of Bangladesh Rice Research Institute, Gazipur-1701 for the period of 2016-2019.
   c. **Member** of "Material receive and Purchasing Committee" of "Improvement and Validation of BRRI developed head feed combine harvester" in 2017.
   d. **Member of** FMPHT division **Revolving Fund** expenditure committee in 2016.
   e. **Coordinator of the** FMTD project in the district of Gazipur in 2014.
   f. **সদস্য "ব্রি ২০১৮-১৯ মওসুমে স্থাপিত প্রদর্শণী মনিটরিং কমিটি"**
   g. **Member** of "Purchasing Committee" of the "SFMRA" project in 2019.
   h. **সদস্য** "প্রাক্কলন যাচাই কমিটি-২" ব্রি, গাজীপুর

i. **Member of** FMPHT division **Revolving Fund** expenditure committee in 2020

4. Membership of Professional Societies

a. The Institution of Engineers, Bangladesh (M-26068)
b. Bangladesh Rice Research Institute Scientist's Association (BRRISA)
c. KRISHIBID INSTITUTION, BANGLADESH
d. Bangladesh Society of Agricultural Engineers (BSAE)

5. Research project, Joint study, and execution

a. Executed joint study as **a Working Scientist** at the BRRI-KOICA Project namely "Development of Research Capacity of Bangladesh Rice Research Institute".

b. Executed Follow-up on "Development of Research Capacity of Bangladesh Rice Research Institute.

c. **Co-principal Investigator** of the Program entitled "BRRI Solar Light Trap. Funded by the Research and Innovation program under the Ministry of Agriculture (2018-19).

d. **Co-principal Investigator**, "Improvement and validation of BRRI developed head feed combine harvester", F**unded by**: World Bank, IFAD, and Government of Bangladesh (GoB), Duration: April 2017- September 2018.

e. Working Scientist for Synchronized cultivation program at Habiganj and Brahmanbaria District.

6. Training conducted and attended as a Resource Speaker in Different Categories of Training Program

a. Total 08 nos Field demonstration cum informal training conducted as a trainee in different places of Rajshahi and Comilla during the season Aman and Boro, 2010.

b. Total 06 nos Field demonstration cum informal training conducted as a trainee in different places of Gazipur during the season of Aus, Aman, and Boro, 2011.

c. Total 08 nos Field demonstration cum informal training conducted as a trainee in different places of Rajshahi and Gazipur during the season of Aus and Boro, 2012.

d. Total 04 nos Field demonstration cum informal training conducted as a trainee in different places of Gazipur during the season of Aman, 2013.

e. 02 nos Farmers training on **কৃষিযন্ত্র চালনা ও রক্ষণাবেক্ষণ শীর্ষক প্রশিক্ষণইন্টিগ্রেটেড এগ্রিকালচারাল প্রোডাক্টিভিটি প্রজেক্ট (আইএপিপি)- ব্রি কম্পোনেন্ট, ২০১৪**

f. Farmers training on Farm Machinery: Repair and Maintenance.

g. Participated as a trainer in farmers' training on seedling raising for mechanical rice transplanter, 2014.

h. Trainer of 3 days long training program for agriculture machine operators: funded by BRRI Research Capacity Building Project and organized by FMPHT division on 02 June 2014.

i. Trainer of 3 days long training program for MIADP agriculture machine operators: organized by the FMPHT division on 26 April 2015.

j. Trainer of 7 days long training program for DAE Irrigation project agriculture machine operators: organized by the FMPHT division during the period of 25.04.2018 to 01.05.2018.

k. Trainer of 3 days long training program of DAE Agricultural Engineers for Synchronizing Agriculture on machine operation and maintenance: organized by FMPHT division during the period 03-05 November 2019.

7. Participation in workshops

a. Participation in a 1-day Planning workshop on **"Agricultural Engineering Future Research Programmes-2009-2010 of NARS Institute"** at BARC during the period of 24-25 May 2010.

b. Participated in the International Exhibition & Seminar on **"Rice Processing Technology"** Organized by RICE TECH EXPO, Bangladesh at Basundhara Convention Center 2, Baridhara, Dhaka, 8 September 2010.

c. Participated in the International Seminar on **"Role of Agricultural Engineers in achieving Food and Nutritional Security in Bangladesh"** Organized by BARC, 26 Dec.2009.

8. Participation in Agricultural Fair

a. Participated in different agricultural fairs in 2010, 2011, and 2012 organized at the district level under the FMTD Project and the department of agricultural extension (DAE).

b. Participated in the Digital Public Innovation Fair 2010.

c. ৪র্থ জাতীয় উন্নয়ন মেলা, ২০১৮

9. Participation in technology transfer systems

a. Demonstrated BRRI-developed Farm Machinery and imported Modern Agricultural Machinery.

b. Survey of Farm Machinery uses farmers' wants, disadvantages of machinery use, and Agricultural machinery accidents.

c. Demonstration and Extension of BRRI Developed Solar Light Trap for the farmers of Bogura, Narsingdi, Jessore, Khulna, Sherpur, and Gazipur from 2017 to 2019 under the Research and Innovation program of the Ministry of Agriculture (MoA).

d. Demonstration and Extension of BRRI Developed Air Blow type Engelberg Huller to the farmers of Cumilla and Sirajganj from 2012 to 2015 under the KOICA project.

e. Demonstration and Extension of BRRI Developed Agricultural Machinery among the Farmers of Kushtia, Gaibandha, Joypurhat, Sherpur, Jamalpur, and Gazipur, districts from 2010 to 2015 Under the FMTD project. (BRRI Rice-Wheat Thresher, BRRI Open drum thresher, BRRI Rice-Wheat Reaper, BRRI Winnower, BRRI Prilled urea applicator, and BRRI Weeder).

TRAINING COURSES COMPLETED

(a) In Country

Organization	Year	Duration		Name of Programme
		Months	Days	
BLC Tool Room and Engineering Works	2022		05	Training on operation of Haas CNC machining center & Haas CNC Turning

				center
Greenland Technologies Limited	2022	03		Solidworks and CNC programming MasterCAM
Bangladesh Rice Research Institute (BRRI)	2021		06	Advanced Research Data Management using R Studio and Refresher of Scientific Report Writing Training Course
Bangladesh Rice Research Institute (BRRI)	2020		05	Scientific Report Writing Training Course
Bangladesh Rice Research Institute (BRRI), Cabinet Division and a2i Programme, ICT Division	2020		02	Innovation in Public Service
Bangladesh Rice Research Institute (BRRI)	2019		05	Agricultural Research Methodology Training Course
Bangladesh Rice Research Institute (BRRI)	2018	-	06	Rice Physiological Development through Trait Discovery
Bangladesh Rice Research Institute (BRRI)	2017	-	03	Experimental Design and Data Analysis Training Course
Bangladesh Agricultural Research Council (BARC)	2014	-	03	Seed Quality Management
Graduate Training Institute, Bangladesh Agricultural University, Mymensingh	2014	-	13	Research Methodology
Bangladesh Agricultural Research Institute (BARI)	2014	-	4	Use of Farm Machinery and Efficient Irrigation System Management
Bangladesh Rice Research Institute (BRRI)	2013	-	7	Advanced Training on Drawing and Design of Agricultural Equipment by AutoCAD
Bangladesh Rice Research Institute (BRRI)	2013	-	3	Training on Operation of Laboratory Equipment
Bangladesh Agricultural Research Council (BARC)	2013	-	2	Agricultural Land Management for Improving Soil Fertility and Irrigation Efficiency
Bangladesh Rice Research Institute (BRRI)	2013	-	4	Engineering Drawing and Design of small Equipment by AutoCAD Tools
Bangladesh Agricultural Research Institute (BARI)	2011		5	Training Course on Agricultural Engineering Technology
Bangladesh Rice Research Institute	2011		3	Breeder Seed Production and Preservation
Bangladesh Rice Research Institute	2010	1 Month		1 Month Rice Production Training Course
Bangladesh Rice Research Institute	2009		3	Hybrid Rice Development and Seed Production
Department of Agril. Extension (DAE)	2009		5	Project Implementation Technique

(b) Training in Abroad

Country	Year	Duration		Name of Programme
		Months	Days	
Korean Int. Co-operation Agency (KOICA), Korea Institute for Development Strategy (KDS), Korea	2012	-	15	Training on Technical Course
CAAMS, Beijing, China	2016 (21 July –10 August)		21	Official Seminar on Agricultural Mechanization for Developing Countries

MAJOR SUBJECT STUDIED

B.Sc. Agricultural in Engineering	**Coursework in B.Sc. Agricultural Engineering** **Part I (1st Year)** Physics Chemistry Mathematics Soil Science Engineering Drawing: (a) Civil Drawing (b) Mechanical Drawing Agronomy Engineering Shop Engineering Mechanics and Kinetics Engineering Materials and Estimation **Part II (2nd Year)** Mathematics Computer Science Engineering Thermodynamics Electrical Engineering and Electronics Fundamentals of Food Strength of Materials Theory of Structures Fluid Mechanics & Hydraulics Agricultural Statistics Crop protection Elementary Economics Rural Sociology **Part III (3rd Year)** Agricultural Machinery and Power Sources Irrigation & Drainage Engineering Soil Mechanics and Foundation Engineering Soil and Water Conservation Engineering Electrical Machinery and Rural Electrification Agricultural Meteorology and Hydrology Survey (Field Survey) Agricultural Extension Food Plant Engineering **Part IV (Final Year)**

	Mechanization and Engineering Management On Farm Water Management Aquaculture Engineering Agricultural Machinery Design and Analysis Hydraulic Machinery and Irrigation Structure Design of Concrete Structures Food Process Engineering and Quality Control Refrigeration, Air-conditioning and Process Engineering Ground Water and Wells
Master of Engineering in Environmental Engineering	Environmental Modeling and GIS Application, Environmental Sanitation, Environmental Management, Theory of Water Treatment, Theory of Sewage Treatment, Environmental Impact Assessment, Traffic Engineering, Geometric Design of Highways, Sediment Transport, Computational River Morphology.

REFERENCES

1. **Dr. Md. Abdur Rahman**
   Former Chief Scientific Officer and Head
   Farm Machinery and Postharvest Technology (FMPHT) Division,
   Bangladesh Rice Research Institute (BRRI),
   Gazipur-1701, Bangladesh
2. **Dr. Durrul Huda**
   Chief Scientific Officer and Head
   Farm Machinery and Postharvest Technology (FMPHT) Division,
   Bangladesh Rice Research Institute (BRRI),
   Gazipur-1701, Bangladesh
3. **Dr. Md. Delwar Hossain**
   Professor
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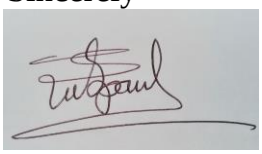
   Bangladesh University of Engineering and Technology (BUET),
   Dhaka - 1000, Bangladesh

Sincerely



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