

Contents of CV of Dr. Md. Khairul Alam Bhuiyan
CURRICULUM VITAE



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Section A

Personal notes:

Mailing address	Principal Scientific Officer, Agronomy Division, Bangladesh Rice Research Institute, Gazipur-1701
Home district	Cumilla
Nationality:	Bangladeshi
Religion	Islam
Marital status	Married
Date of birth	01-01-1970
Current age	53years
Permanent address	Village-Alahabad, Post Office- Alahabad, PS –Debidwar, District- Cumilla.
Date of joining as scientific officer	28 th February, 1999,
Service length	24 years

Section B

Education and training

Educational career

<i>Name of the Examination</i>	<i>Board/University</i>	<i>Year</i>	<i>Major subjects/courses/ Title</i>
Bachelor of Science in Agriculture	Bangladesh Agricultural University	1993 (Held in 1997)	Agronomy, Horticulture, Plant Pathology, Entomology, Soil Science, Biology, Genetics and Plant Breeding, Biochemistry, Statistics, Crop Botany, Agricultural Economics Rural Sociology Etc.
Master of Science in Agronomy	Bangabandhu Sheikh Mujibur Rahman Agricultural University	2001	Principles of Crop Production, Crop Physiology, Seed science, Vegetable Seed Technology, Weed Science, Cropping System, Cereal Crop Production, Irrigation Agronomy, Soil Fertility, Soil Plant Analysis, Design of Experiments.
Doctor of Philosophy (PhD.)	Bangladesh Agricultural University	2015	Effect of resource conservation technologies and weed management on nitrogen use efficiency, growth and yield of rice

Research interests

- Rice weed and nutrient management
- Sustainable agriculture, food security and safety.
- Soil fertility management
- Plant nutrition
- Crop production
- Farm management
- Integrated farming
- Crop physiology
- Weed science

Training/ workshop/ Conference

(a) Training in Country:

Sl no	Organizational	Year			Duration		Name of programme
			From	To	Months	Days	
1	BIRRI	1999	12 July	09 Sept	02	-	Rice Production, Communication and Office Management.
2	BSMRAU	2000	14 June	28 June	-	15	Computer training course in MSTAT, IRRISTAT, & SPSS
3	BIRRI	2000	22 Oct	28 Oct	-	07	Research Management Information System (Data capture)
4	BARD	2001	1 st Nov	14 Nov	-	14	Computer application course on Word, MS Excel, MS power point and SPSS

5	BARD	2001	5 Aug	15 Nov	03	15	Foundation training on administrative and office management
6	BRI	2003	15 Nov	16 Nov	-	02	Hybrid rice seed production training
7	BARC	2005	06 June	09 June	-	04	Management of problem soil
8	IRRI-BRI	2008	30June	02 July	-	03	Participatory Variety Selection and Socio-economic Components in Experimental Sites
9	CIMMYT-Bangladesh RDRS	2011	16Jan	20Jan	-	07	Safe use of Herbicides and effective weed control
10	BRI	2011	2 March	03 March	-	02	GSR- Hybrid rice seed production training course
11	CIMMYT-IRRI-World Fish	2012	June17	June21	-	05	Data management and report writing
12	BARC	2015	25May	27May	-	03	Fertilizer Recommendation Guide-2012
13	NATA	2018	26Dec	8 Jan		12	Project management ,procurement and monitoring
14	BRI	2018	11-Dec	12 Dec		02	Procedure of Soil and plant analysis
15	BARC	2019	29April	30April		02	Climate smart agriculture
16	BARC	2019	15June	20June		06	Financial and procurement management training

Training Abroad:

(b) Training Abroad:

Country	From	To	Year	Duration		Name of programme
				Mos	Days	
IRRI, Philippines	1 Sept	12 Sept	2003	-	12	Two-Week Rice Production training course
IRRI, Philippines	3 May	7 May	2004	-	05	Basic Experimental Designs and Data Analysis Using IRRISTAT

Workshop / Conference Abroad

Country	Year	Duration		Name of programme
		Mos.	Days	
IRRI, India	2013	-	05	STRASA planning and evaluation
IRRI, Nepal	2014	-	03	Technology adoption and dissemination
IRRI, India	2018		03	Ec-IFAD planning and evaluation meeting
Singapore	2018		05	International Rice congress
Chandigarh, India	2019		03	EC-IFAD & CSISA workshop and planning and evaluation meeting
Brisbane, Australia	2022		05	Tropical Agriculture conference
Philippines, Manila	2023		05	International Rice congress
India	2023		08	Travelling seminar on conservation agriculture

Section C

Significant contribution to agricultural development through agronomic and Weed Management Research:

- Contributed to Weed management Research for about 22 years.
- Tested and recommended about 60 chemical group of herbicides (approx. \approx 800 brand) which is about 90% of rice herbicides (Weed control Efficiency is above 80%) now available in Bangladesh and farmers are now using these technologies. Farmers are now adopting these cost-effective technologies throughout the country. About three million rice lands make use of herbicide. So, adopting these technologies farmers can save about 70-80% weed control costs.
- Farmers are now saving billions of takas from weeding costs. Through better weed control crop loss decreased and improved fertilizer and water use efficiency, thus helped to obtain high rice crop yield.
- Involved an extensive applied research and basic work and take up some technologies regarding weed management in rice, including herbicide resistance weeds, weed seed bank, threshold level of different rice weeds, integrated weed management technology in different rice culture and ecosystem, mechanical weed control, chemical weed control, organic weed control etc.
- Led the weed research team of BRRI, Bangladesh, and worked in collaboration with renowned weed scientist (Dr. Devid Johnson, Dr. Charlie Riches and Dr. Marteen Mortimeer, R.T. Lubigan, Dr. Virender Kumar and Dr. Sudhanshu Singh from IRRI).
- Now working as weed science specialist of IRRI funded CSISA project and involved in weed management technology dissemination in Greater Jessore, Faridpur, Dinajpur and Gazipur (Kapasias and Sripur) district of Bangladesh.
- As a rice agronomist contributed to develop scores of agronomic technologies which will helping to bring food security in rice in the country.
- Authored or co-authored several weed related publications and has presented research paper at national and international conference.
- His major research work on PhD thesis was weed management in DWSR under AWD irrigation system.
- Recommended a complete weed management technology regarding DWSR under AWD irrigation system.
- Recommended a complete weed management technology in Pirojpur, Gopalganj and Bagerhat district.
- Recommended a complete weed management technology in Rice-fellow-fellow cropping system area of Pirojpur, Gopalganj and Bagerhat district.
- Nitrogen management of short duration varieties in rainfed condition
- Development of resource conservation rice production technology
- Studied the effect of herbicides on soil microbial population of rice
- Studied the effect of Different Seed Bed Media on Raising of Quality Seedling of Rice during Boro Season
- Recommended and studied Performance of balanced fertilization and weed management technologies in Pirojpur-Gopalganj and Bagerhat district

- Optimizes number of seedlings/hill, spacing and seedling age to enhance the productivity of rice for saline areas.
- Studied Yield response and nitrogen use efficiency of modern Boro rice using USG and BRRI prilled urea applicator
- Studied the effect of nitrogen levels and weed management on weeds abundance and grain yield of BRRI hybrid dhan3 under AWD irrigation system
- Studied response of saline tolerant rice varieties to different nitrogen management practices in the farmers field of coastal saline region of Bangladesh
- Studied nutrient management and soil amendment options for dry season (*boro*) rice in coastal salt- affected soils for raising productivity
- Studied nitrogen requirement in modern Boro and T. Aman varieties
- Studied Musk melon intercropping with lentil in tidal non saline ecosystem
- Studied Shallow DWR+Fish mixed culture: A promising technology in Boro-Fellow – Fellow cropping pattern in Gopalganj area
- Studied Performance of Bensulfuron 1.1% + Metsulfuron 0.2% + Acetachlor 14% for weed control in rice.
- Studied Performance of pre plant herbicide authority (sulfentrazone) for weed control in rice
- Studied eco-friendly weed management technologied in rice production
- Studied Relay cropping with jute and Aman at Gopalganj : Agronomic management/ intervention
- Details study of Suitable weed control options (pre emergence herbicide + 1HW, BRRI weeder + 1HW, Post emergence herbicide + 1HW) in intensified lowland system
- Studied yield maximization of rice in rice-rice-cropping system
- Studied optimum N requirement in T aus varieties
- Studied competitive ability of rice varieties against weed suppression in Boro and T aman season
- Studied allelopathic potentiality of rice varieties
- Studied the effect of micronutrient and organic matter for growth and yield maximization of Boro rice
- Studied line and logo method of rice transplanting
- Studied competitive ability of rice varieties against weed supression

Section D

Experiences as working scientist

Achievement: 24 years research experience in agronomic field.

Working experience:

Title of positions	Organization	Duration
Scientific officer	Farm Management Division BRRI, Gazipur,	From 28 th February, 1999 to 7 th February,2001
Scientific officer	Agronomy Division, BRRI, Gazipur	From 8 th February, 2001 to 15 th July 2006
Senior Scientific officer	Agronomy Division, BRRI, Gazipur	From 16 th July, 2006 to 31 October 2018
Principal Scientific Officer(current charge)	Agronomy Division, BRRI, Gazipur	1 st November 2018 to 30January 2019
Principal Scientific Officer	Agronomy Division, BRRI, Gazipur	31 January 2019 to till date

Summary of working experience

Duration: 28th February, 1999 to till date

- Started as scientific officer of Farm management division and done farm management related research work and after that Worked as scientific officer of Agronomy division, BRRI then Senior Scientific Officer, Agronomy Division, BRRI.Gazipur
- During this period I have undertaken agronomic research program to increase the productivity of rice with reduction of cost of production. Weed management, Crop establishment, Fertilizer management, Time of planting of varieties and yield maximization were the priority areas where research programs were undertaken. On-farm trials of developed technologies were done for dissemination.
- To solve the weed problem in the farmer's field collaborative research program were undertaken in the farmer's field since 2001 to till date
- The developed technologies were disseminated to the farming communities through distribution of leaflets, farmer's field days and workshops.
- Worked as project scientist of two projects named "Development of weed management strategies for lowland rice in Bangladesh" and "Promotion of cost-effective Weed management practice for lowland rice in Bangladesh"
- worked as project scientist of these project at Comilla site, Bangladesh. The project was funded by DFID, UK and implemented in collaboration with NRI, UK and initiated in 2003 and completed in 2006. The research work was done in 4 Thanas involving huge number of farmers. Aim of these two project was promotion and dissemination of weed management technologies in the farmers field. Have close linkage with GO (DAE),NGOs , and private organizations for dissemination of developed technologies.
- Worked as a project scientist of EC-IFAD funded project"Improved rice crop management for raising productivity in submergence-prone and salt affected rainfed

lowlands in South-Asia” at Barisal and Patuakhali site from 2011-2014 regarding dissemination and adoption of suitable rice technologies.

- Working as principal investigators of IRRI funded EC-IFAD project (From 2014-2017 to till date) and adoption of new technologies regarding nitrogen management in rainfed lowland rice
- Worked as project director of GOB funded project of PGB-IADP (Pirojpur- Gopalganj- Bagerhat Integrated Agricultural development project) and involved in dissemination of rice technologies and livelihood improvement in those areas.
- Involved in integrated weed management research in rice, evaluated new chemical suitable for weed control, Herbicide resistant weed, weed shifting, determination rate of herbicide for effective weed control in the farmers field.
- Disseminating and developing suitable weed management technology for southern part of Bangladesh(Pirojpur, gopalganj and Bagerhat district) under PGB-IADP project
- Obtained PhD from BAU regarding Weed Science and Resources Conservation technologies.

Section E

Achievement:

- Published 50 (Fifty) full papers in national and international journal
- Abstracts (Eleven): Eleven
- Published five books and many brochures, popular articles and monographs
- Published three book chapter in Doubling rice productivity book, BRRI, Gazipur

List of Publications

(a)Scientific journal

01. **Bhuiyan M.K.A**, GJU Ahmed, J.A. Begum and S.A. Islam. 2007. Bio-Efficacy of Pyrazosulfuron-ethyl 10 WP for weed management in transplanted rice(*Oryza sativa* L.).Intl. J. BioRes.3(1): 58-63
02. **Bhuiyan Md. Khairul Alam** and Gazi Jashim Uddin ahmed.2010. Performance of Mefenacet + Bensulfuron methyl 53% WP against weed suppression in transplanted paddy. Pak. J. Weed Sci. res. 16(2): 181-187
- 03.**Bhuiyan, M.KA**, G.J.U.Ahmed, A.J. Mridha, M.G.Ali, J.A.Begum and S.T.Hossain.2010. Performance of Oxadiargyl 400sc for weed control in Transplanted Rice. Bangladesh J. Weed Sci. 1(1) 57-63
04. **Bhuiyan, MKA**, GJU Ahmed , AJ Mridha and Jinnat Ara Begum .2009. Performance of weed management practices for different establishment method of rice (*Oryza sativa* L.) in dry season. Bangladesh Agronomy Journal.vol.12(1&2). 73-79
05. **Bhuiyan MKA**, AJ Mridha·GJU Ahmed· Jinnat Ara Beguma nd Rakiba Sultana. 2011.Performance of chemical weed control in direct wet seeded rice culture under two agro-ecological conditions of Bangladesh. Bangladesh J. Weed Sci. 2(1&2):1-8.
- 06.**Bhuiyan M.K. A.**, M. M. Haque, Q. A. Khaliq, J. A. Begum² and A.H.M.R. Mawlla 1999 Productivity and economics of grain legumes intercropped with maize. Bangladesh Agron. J. 9,(1&2) :35-42P

07. **Bhuiyan M.K.A.**, M.M. Haque, Q.A. Khaliq, A. Hamid and J.A. Begum, 2004. Light availability, Phenology, nodulation and growth of legumes intercropped with maize. *The Agriculturist*, vol.2, No. 1-10P
08. **Bhuiyan MKA**, A.J.Mridha, GJU Ahmed, SA Islam and MAA Mamun. 2014. Effect of rice bran application for eco-friendly weed control, growth and yield of lowland rice in Bangladesh. *International journal of Agronomy and Agricultural Research*. Vol.5(3), P. 40-44
09. **Bhuiyan MKA**, SA Islam, R Sultana, MM Rana, MM Mahboob and L Nahar 2013-2014. Competitive ability of exotic rice cultivars against weed suppression in wet season. *Bangladesh J. Weed Science* Vol.3&4, P. 69-76
10. **Bhuiyan MKA**, L.Nahar, MM Mahbub, R. Sultana, M.J.A. Mridha, M.A.Rahman and M. Kamruzzaman. 2016. Yield response and nitrogen use efficiency of Boro Rice varieties as affected by different methods and of USG and prilled urea applicator. *Bangladesh Agronomy Journal*. vol.19(1)p:1-10
11. **MKA Bhuiyan**, SU Bhuiya, MA Saleque and Amina Khatun. 2017. Nitrogen application in direct wet seeded rice under alternate wetting and drying irrigation condition: Effects on grain yield, dry matter production, nitrogen uptake and Nitrogen use efficiencies. *Journal of Plant Nutrition*. 2017, vol. 40(17): 2477–2493
12. **M.K.A Bhuiyan**, Md. Mostofa Mahbub, Lutfun Nahar and Md. Zakaria Ibne Baki. 2017. Effect of Nitrogen levels and weed management on yield performance of BRRI hybrid dhan3 under AWD irrigation system. *Bangladesh Agronomy Journal*. Vol 20(1):13-24
13. **M.K.A. Bhuiyan**, A.J. Mridha, Sudhanshu Singh, A.K. Srivastava, U.S.Singh and M.A. Bari. 2018. Combination of stress tolerant rice varieties and improved nutrient management practices to mitigate the effect of salinity in coastal area of Bangladesh. *Bangladesh rice journal*. Vol.21 (1). Page: 77-90
14. **M. K. A. Bhuiyan** and M. M. Mahbub. 2017. Efficacy of pretilachlor 50% + trisulfuran 2% wp for control of annual weeds. *Bangladesh Journal of weed science*. vol.6 (1&2). Page: 7-16
15. **M. K. A. Bhuiyan**, M. M. Mahbub and MZI Baki. 2018. Differential sensitivity of annual weeds of Bangladesh against metolachlor+ bensulfuran methyl 20% wp herbicide in rice cultivation. *Bangladesh agronomy Journal* (Accepted)
16. **M. K. A. Bhuiyan**, M. M. Mahbub, Zakaria Ibne Baki and Lutfun Nahar Laila. 2017. Sensitivity of annual weeds against authority 48 SC (sulfentrazone) herbicide in rice cultivation. *Bangladesh Rice Journal*. vol.21((1), Page: 67-76
17. **Khairul Alam Bhuiyan**, Sultan Uddin Bhuiya, M.A. Saleque & Amina Khatun (2018) Grain yield, growth response, and water use efficiency of direct wet-seeded rice as affected by nitrogen rates under alternate wetting and drying irrigation system,

Communications in Soil Science and Plant Analysis, DOI:
[10.1080/00103624.2018.1526942](https://doi.org/10.1080/00103624.2018.1526942)

18. **Khairul Alam Bhuiyan** & Gazi Jashim Uddin Ahmed,. (2010). Performance of mefenacet+bensulfuron methyl 53% wp against weed suppression in transplanted paddy. Pak. J. Weed Sci. Res. 16 (2): 181-187
19. **M K A Bhuiyan**, A K M S Islam , M A R Sarkar , M A A Mamun , M U Salam and M S Kabir.2021. Agronomic Management and Interventions to Increase Rice Yield in Bangladesh. Bangladesh Rice J. 24 (2) : 135-155, 2020, doi.org/10.3329/brj.v24i2.53453
20. **M K A Bhuiyan** , M U Salam and M S Kabir. 2021. Integrated Weed Management Strategies for Sustainable Rice Production in Bangladesh. Bangladesh Rice J. 24 (2) : 157-184, 2020, doi.org/10.3329/brj.v24i2.53454
21. **MKA Bhuiyan** and MM Mahbub. 2022. Weed persistence, crop resistance and phytotoxic effects of new molecule herbicides in transplanted rice. Bangladesh journal of weed science. . Vol7(1&2).85-90
22. Mamun.M.A.A., R.Sultana,S.A. Islam, M.A. Badshah, **M.K.A. bhuiyan** and A.J.Mridha. 2011. Bio efficacy of bensulfuron methyl+ pretilachlor 6.6% gr against weed suppression in treanplanted rice. Bangladesh. Bangladesh J. Weed Sci. 2(1&2):9-13
23. Ahmed, G.J.U., A. J. Mridha, **M.K.A. Bhuiyan**, C.R. Riches and M. Mortimer 2003.Effect of different weed management systems on weed control, plant growth and grain yield of lowland rice. In proceedings of the nineteenth Asian- Pacific weed science society conference.17-21 March, Manila, Philippines.84-92P
24. Ahmed, G.J.U., **M.K.A. Bhuiyan**, C.R. Riches, M. Mortimer and D. Johnson, 2005.Farmers participatory studies of intregrated weed management systems for intensified lowland rice. In proceedings of the 20th Asian- Pacific weed science society conference.07-11Nov, Ho-Chi-Minh city, Vietnam.524-528P
- 25.G.J.U. Ahmed, **M.K.A. Bhuiyan** ,C.R. Riches and J. A. Begum.2007. Weed management practices in lowland rice for increasing productivity and farm incomes in rice cultivation. Intl. J. BioRes. 2(4):29-33
26. Mamun Md. Abdullah Al, Rakiba Shultana, **M.K.A. Bhuiyan**, A.J. Mridha and A. Mazid.2011. Economic weed management options in winter rice. Pak. J. Weed Sci. Res. 17(4):323-331
27. Chowdhury M.J.U., **M.K.A. Bhuiyan**, M.S.Islam and M.A.Wadud.2003.Effect of planting method and type of laborer on the productivity of rice and labor utilization. J.Sci.Tech.1:59-64P
28. Islam, M. S., **M. K. A. Bhuiyan** and M. J. U. Chowdhury 2004. Effect of younger seedling and planting density on the growth and yield of rice planted in system of rice intensification (SRI) method. Bangladesh journal of Agricultural Sciences.Vol.31, No. 1: 105-110P

29. Islam, M.Sh., M.A. Mazid, M.S.Alam, N. Ferdous and **M.K.A. Bhuiyan**.2003. Bio-physical and Socio-Economic Scenario of the High Barind Farms: A Study of Farmers' Perceptions with Emphasis on Rice.J Agric Rur Dev 1(1), 69-76P
- 30.Rashid M.M., M. Mofazzel Hossain, M.Z. Alam, M. Ibrahim and **MKA Bhuiyan**. 2003.Seasonal abundance and control of spiraling whitefly, *Aleurodicus disperses* russel on guava.Pakistan journal of biological science 6(24):2050-2053P
31. Ferdous A.K.M., Q. A. Khaliq, M. Moynul Haque, A.J.M. Sirajul Karim and **MKA Bhuiyan**,2004. Effect of nitrogen fertilizer on growth, nitrogen and phosphorus uptake and yield in edible podded pea. Bangladesh Agronomy journal.10(1&2): 133-140P
32. Mridha. J.A., K.M. Iftekharuddaula, M.S. Zahan, **M.K.A. Bhuiyan** and A. Bagi. 2010. Submergence tolerant rice varieties and their management option for Northwestern region of Bangladesh. Bangladesh Agronomy journal.13 (1&2): 111-116.
33. Islam S.A., M.A. Mannan, **M.K.A. Bhuiyan**, F. Khatun and M.A.J. Mridha. 2010. Influence of late planting on growth and yield of Transplanted Aman rice. Bangladesh Agronomy journal.13(1&2): 111-116.
34. Mannan M.A., M.S.U. Bhuiyan, M.I.M. Akhand, **M.K.A. Bhuiyan**, and M.M Rana. 2012. Performance of photoperiod sensitive modern aromatic rice varieties as influenced by planting dates in boro season. Agronomy journal 15(2): 29-36
35. Rana M.M. , M.A.A. Mamun, M.I.M. Akhand, **M.K.A. Bhuiyan**, and M.A.J. Mridha. 2012. Weed control in transplanted rice: Efficacy of Fenoxaprop-P-Ethyl. Bangladesh J. Weed Science. 3(1& 2): 53-58.
36. M. A. A. Mamun, R. Shultana, S. A. Islam, **M. K. A. Bhuiyan** and A. J. Mridha. 2012. Efficacy of metsulfuron-methyl 20% WDG in controlling weeds in transplanted rice. Agron. J. 2012, 15 (1): 17-23
37. Amina Khatun, Md. Khairul Quais, Hasina Sultana, **MD. Khairul Alam Bhuiyan** and Md. Abu Saleque.2015. Nitrogen Fertilizer Optimization and Its Response to the Growth and Yield of Lowland Rice. Research on Crop Ecophysiology .Vol. 10/2, P : 1-16
38. R Shultana, MAA Mamun, L Naher, **MKA Bhuiyan** and AJ Mridha 2015. Response of Nerica rice to nitrogen fertilization.Bangladesh Agronomy Journal.vol.18(2).P:9-14.
39. M. M. Mahbub, M. I. M. Akhand, **M. K. A. Bhuiyan**, B. J. Shirazy. 2017. Practice of Sustainable Rice Production by Weed Management. Sch. Bull.; Vol-3, Iss-7 :292-296
40. MA, Hossen , AKM Saiful Islam, MK Zaman, A. Khatun, MA Alam and **MKA Bhuiyan** .2017.Mechanical deep-placement of urea fertilizer with a prilled urea applicator saved fertilizer and increased yield for long duration wet land rice variety. BJPST: 15(2): 025-030

41. Amina Khatun, **M. K. A. Bhuiyan**, A. B. M. Mostafizur, M. S. U. Bhuiya and M. A. Saleque. 2018. Nitrogen Uptake Dynamics and Dry Matter Production of Rice in Response to Nitrogen Fertilizer Application. *Journal of Food Science and Engineering* 8 (2018) 35-45
42. Mahbub.M. M. and **M. K. A. Bhuiyan**. 2018. Performance of Bensulfuran methyl 12% + Bispyribac sodium 18% WP against annual weeds in transplanted rice (*Oryza sativa*) cultivation in Bangladesh. *Scientia Agriculturae*.21 (3) : 85-92
43. M. M. Mahbub¹, **M. K. A. Bhuiyan** and M. M. Mir Kabir. 2017. Performance of Metsulfuron Methyl 10% + Chlorimuron Ethyl 2% WP Against Annual Weed Inhibition in Transplanted Rice.doi. Haya: Saudi J. Life Sci.; Vol-2, Iss-8 :298-305
43. S Islam A K M, M A Hossen, **M K A Bhuiyan**, M M Islam and M A Rahman. 2018. Performance of Weeder in Mechanically Transplanted Rice Cultivation. *Bangladesh Rice J.* 22 (1): 25-34,
44. Kabir M S, M U Salam, A K M S Islam, M A R Sarkar, M A A Mamun, M C Rahman, B Nessa, M J Kabir, H B Shozib, M B Hossain, A Chowdhury, M Nasim, K M Iftekharuddaula, M S Hossain, **M K A Bhuiyan**, B Karmakar, M S Rahman, M M Haque, M T Khatun, M P Ali, S M H A Rabbi, P L Biswas, E S M H Rashid and N M F Rahman. 2020. Doubling rice productivity in Bangladesh: A way to achieving SDG-2 and moving forward. *Bangladesh Rice Journal*, 24(2)
45. Ahmed, S., Kumar, V., Alam. M., Dewan, **Bhuiyan, MKA.**, Miajy, A. Krupnik T. 2021. Integrated weed management in transplanted rice. Options for addressing labor constraints and improving farmers' income in Bangladesh. *Weed technology*, 1-34. Doi: 10.1017/wet.2021.50
46. Nahar Lutfun, Rakiba Shultana, **Khairul Alam Bhuiyan**, Md. Zakaria Ibne Baki and Romana Akter. 2017. Assessment of different crop residues and herbicide on weed control efficiency in Transplanted Aman rice. *International Journal of Applied Research*. 3(3) 7-13
47. Rahman, N., Rahman, M., Baten, M., Hossain, M., Hassan, S., Ahmed, R., Hossain, M., Hossain, A., Aziz, M. ., Haque, M., Halder, T. ., Mamun, **MKA., Bhuiyan**, M., Khan, M., Chowdhury, A. ., Qayum, M., Sarkar, M., Salam, M., & Kabir, M. (2021). Weather Forecast Based Rice Advisory Services in Bangladesh. *Bangladesh Rice Journal*, 25(1), 51–74. <https://doi.org/10.3329/brj.v25i1.5517>
48. M.M. Mahbub and **M.K.A. Bhuiyan**.2021. Effect of Fenoxypop-P-Ethyl 10% + Ethoxysulfuron 10% WP on Annual Weeds Suppression and Yield of Transplanted Rice in Bangladesh. *American-Eurasian J. Agric. & Environ. Sci.*, 21 (4): 217-225. DOI: 10.5829/idosi.ajeaes.2021.217.225.
49. M. M. Mahbub, M. I. M. Akhand, **M. K. A. Bhuiyan**. 2022. Weed Management in Dry Direct Seeded Rice for Enhancement of Production. *J. Basic. Appl. Sci. Res.*, 12(1)7-12.

50. M M Mahbub and **MKA Bhuiyan**. 2022. Evaluation of Pyrifthalid + Bensulfuran methyl on weed suppression and yield of transplanted rice in Bangladesh. Bangladesh journal of weed science. Vol7(1&2).91-100.

b. List of Books

1. Ahmed GJU, **M.K.A. Bhuiyan**, C.R. Riches, M. Mortimer. 2006. Weed Identification and Management in rice. Pub. No. 167. First edition. Published by BRRI, Gazipur
2. Mustafi BAA, MA Salam, GJU Ahmed, DNR Paul, M Hossain.....and **MKA Bhuiyan** 2007. Adhunik Dhaner Chas. Pub. No. 05. 13th edition, Published by BRRI, Gazipur
3. Ahmed GJU, **M.K.A. Bhuiyan**. 2008. Dhan Chaser Samossha (Weed part). Pub. No. 08. Third edition. Published by BRRI-IRRI collaboration, Gazipur
4. MA Kashem, **MKA Bhuiyan**, M Nasim, M sk. shamiul Haque, MA Latif, Avjeet Saha, M IU Mollah and KP Halder. 2017. Boro dhaner chas poddoti o babostapona . Publication no. 239. Bangladesh Rice research institute. Gazipur.
5. AKM Saiful Islam, M Anwar Hossen, **MKA Bhuiyan**, M Monirul Islam and M A Rahman. Weed management in mechanically transplanted rice. 2017. Publication no. 224. Bangladesh Rice Research Institute, Gazipur, Bangladesh

c. List of Book chapter

1. **Bhuiyan, M K A**, A K M S Islam, M A R Sarkar, M A A Mamun, M U Salam and M S Kabir. 2020a. Agronomic management and interventions to increase rice yield in Bangladesh. *In: Doubling rice productivity in Bangladesh*, M S Kabir, M U Salam, A K M S Islam, M A R Sarkar and M A A Mamun (Eds.). Bangladesh Rice Research Institute, Gazipur-1701, Bangladesh, 193-218.
2. **Bhuiyan, M K A**, M U Salam and M S Kabir. 2020b. Integrated weed management: Strategies for sustainable rice production. *In: Doubling rice productivity in Bangladesh*, M S Kabir, M U Salam, A K M S Islam, M A R Sarkar and M A A Mamun (Eds.). Bangladesh Rice Research Institute, Gazipur-1701, Bangladesh, 219-258.

d. List of Monographs

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MKA Bhuiyan, seminar on “Principals of good agricultural practice 2020 for safe food and its implication in rice production”. 28th January 2024, BRRI Gazipur

j. Conducted In house training

No.	Name of the Topic	Date	venue	Participants/ remarks
1.	Agronomic constraints of rice production in farmers level and its remedy	27.06.21	Agronomy div., BRRI	All agronomist
2.	Rice growth stage wise agronomic management	27.05.21	Agronomy div., BRRI	All agronomist
3.	Fate of herbicides on soil microorganisms in transplanted rice in rice – rice cropping system	23.11.20	Agronomy div., BRRI	All agronomist
4.	Agronomic data collection and procedure	29.10.19	Agronomy div., BRRI	All agronomist
5.	Lodging management of BRRI varieties	24.09.18	Agronomy div., BRRI	All agronomist

6.	Rice weed control with new Molecule herbicide	14.11.18	Agronomy div., BIRRI	All agronomist
7	Graphical presentation of research results: How to place LSD bars in graphs.	18.07.2022	Agronomy div., BIRRI	All agronomist
8	Climate smart Agronomic management in rice cultivation	02.05.2024	Agronomy div., BIRRI	All agronomist

Section F

On-farm research experience

(Foreign aided and joint venture project)

1) Development of weed management strategies for lowland rice in Bangladesh (2000-2003) (DFID-IIRRI-NRI funded)

This project activity was undertaken in the year of 2000 and completed in 2003. I was engaged in this project from 2001. Natural Resource Institute (NRI), IRRI and BIRRI were partners in implementing research in the farmer's field. Dr. Charlie Riches from NRI, Dr. Mortimer from IRRI, and me involved in the Research Project in Comilla site of Bangladesh. The project was funded by DFID.

The following Research program was undertaken:

- Study of yield loss due to weeds and its socio-economic impact in intensive rice growing system (Boro-fallow-T.Aman and Boro-T.Aus -T.Aman pattern) at Comilla region.
- Study of competitive rice cultivar to select weed competitive rice cultivar. Local and exotic cultivars were tested on-station and on-farm.
- Study of improved weed management option in Comilla for effective and economic weed control.
- Identification and preservation of important noxious weed of rice Comilla region.
- On-farm demonstration of weed control options in the farmer's field for adoption weed control technology.

Other activities:

- Arrangement of farmer's training in 4 Thanas of Comilla district.
- Arrangement of field days to demonstrate the technology for the greater farming communities in the Comilla district.
- Arrangement of workshop with the participation of department of Agril.Extension (DAE), NGO, private sector, herbicide companies, representative from farmer organizations and project area farmers.

Achievements:

(i) Yield loss due to weeds under existing weed control practice were determined. Yield grain due to weed control were also ascertained. Farmers dependent of higher migrant labor were observed. Farmer shortage of cash money were found. Moreover weeding cost showed increasing trend.

(ii) The herbicides Pretilachlor oxadiazon, butachlor were found promising in testing of weed control option. BRRI weeder was also found effective and economical in weed control.

(iii) The promising weed control options were tested in the farmer's field and found effective and economic weed control.

(iv) Exotic cultivars WITA4 and WITA12 (West African origin) and local cultivar were found effective in suppression weed.

(v) Two leaflets about proper weed control and use of herbicides were published and circulated in the greater farming Communities at Comilla region.

(vi) The project was successfully completed with the participation of Breeder, Agronomist and socio-economic of BRRI. Good partnership among NRI (Dr. C.R. Riches, Dr. A. Orr) and IRRI (Dr. M. Mortimer, IRRI, Weed Ecologist) and BRRI (Bangladesh Rice Research Institute) helped to achieve the goal of the project.

2. Promotion of cost-effective Weed management practice for lowland rice in Bangladesh (2003-2006): (DFID, NRI-IRRI)

Worked as project scientist of this project at Comilla site, Bangladesh. The project was funded by DFID, UK and implemented in collaboration with NRI, UK and initiated in 2003 and completed in 2006. The research work was done in 4 Thanas involving huge number of farmers.

The following research work was completed:

- Farmer validation of weed control options in relation to water management
- Up-scaling of farmer assessment/demonstration of improved weed control options.
- Developing the role of private sector/NGO likes in provision of information to farmer.
- Modeling impact of promotion of improved rice weed management

Achievement

- (i) Successfully completed the studies in the farmer's field.
- (ii) Arranged training of farmer and pesticide dealers and discussion meeting with farmer.
- (iii) Developed communication material like poster, leaflets booklets for improved weed management practice for the farmer.

3. Improved rice crop management for raising productivity in submergence-prone and salt affected rainfed lowlands in South-Asia (IRRI-STRASA project)

Achievement

- Developed Improved Nutrient Management Practices in Saline Areas of Bangladesh
- Enhanced Rice Productivity through integration of Stress Tolerant Rice Varieties and various agronomic practices

4. Improved crop management and strengthened seed supply system for drought prone rainfed lowlands in South Asia (EC-IFAD and IRRI funded)

Achievement

- Developed best management practice for drought tolerant varieties in rainfed condition in Bangladesh.
- Developed best nitrogen management for drought tolerant varieties in rainfed condition.

5. The Cereal Systems Initiative for South Asia (CSISA)- phase 111(IIRI-CIMMYT-USAID funded)

Achievement

- Developed Integrated weed management in transplanted rice. Options for addressing labor constraints and improving farmers' income in Bangladesh.
- Screening up BIRI varieties for weed competitiveness for BIRI developed T aman and Boro varieties

6. Agrometeorology information system development project AMISDP (BIRI Part)(GOB-World bank funded project)

Achievement

- Data generation during Aus season for develop DSSAT model for weather-based forecasting of rice

GoB funded project

7. Work as project director of Pirojpur- Gopalganj- Bagerhat integrated Agricultural Development Project (GoB funded)

Achievements:

- Validate improve weed management technologies and reduced weed management cost 8000-9000 tk./ha
- In single crop area of southern district(Rice –fellow-fellow) reduced weed management cost 15000- 17000tk./ha
- Developed fertilizer management of rice in peat soil of Gopalganj area
- Develop and validate Jute-aman intercropping in pirojpur- Gopalganj and Bagerhat area
- Dissemination and adaptation BIRI latest varieties including hybrids in the commanded area
- Develop profitable cropping systems in Pirojpur – Gopalgomj and Bagerhat area.

Section G

Experience in working in multidisciplinary and multicultural environment:

(Worked with many International reputed scientists)

- I worked with Dr. Charlie Riches, Scientist NRI, UK. and Dr. M. Mortimer, weed Ecologist IRRI Philippines from 2000-2003 with project entitled “Development of weed management strategies for lowland rice in Bangladesh” BIRI, IRRI and NRI successfully cooperated for the completion of the project. We planned experiments, analyzed data, worked in the farmer's field, organized workshop and made final report.
- Worked with Dr. Charlie Riches, Dr. Marteen Martimer Dr. D. Johnson, scientists of NRI and IRRI as a project scientist with a project entitled. “Promotion of cost-effective

weed management practice for lowland rice in Bangladesh”. The project was completed in 2006. One NGO, namely SAFE and private company, Syngenta worked as partner in the project.

- Worked with Dr. Sudhanshu Singh, rainfed agronomist. IRRI in a DFID funded project “Improved rice crop management for raising productivity in submergence-prone and salt affected rainfed lowlands in South-Asia” at Barisal and Patuakhali site from 2011-2014 regarding dissemination and adoption of suitable rice technologies.
- Working with Dr. Virend Kumar, weed scientist, IRRI in CSISA project about weed management technologies adaptation and dissemination in south-east region of Bangladesh

Section II

1. Research Project(s) Building, working and Execution:

Name of Research project (developed)	Project funded Type	Year	Implementation	Remarks
1. Developing weed management strategies for rice based cropping system in Bangladesh.	IRRI-BRRI-DFID	2000-2003	Completed	Worked as a project scientist
2. Promotion of cost effective Weed management Practices for Lowland Rice in Bangladesh (BRRI-IRRI-NRI)	IRRI-BRRI-DFID	2003-2006	Completed	Worked as a project scientist
3. Improved rice crop management for raising productivity in submergence-prone and salt affected rainfed lowlands in South-Asia” (IRRI-STRASA project)	IRRI-STRASA	2011-2013	Completed	Worked as co-PI of the component project
4. Pirojpor-Gopalganj- Bagerhat Agricultrai, integrated development project (GoB)	GOB	2013-2017	Completed	Worked as project director
5. Improved crop management and strengthened seed supply system for drought prone rainfed lowlands in South Asia (EC-IFAD and IRRI)	IRRI-EC-IFAD	2014-2019	Completed	Worked as co-PI of the project
6. The Cereal Systems Initiative for South Asia (CSISA)- phase 111	IRRI-BRRI-CIMMYT	2018	Till date	Working as “Rice weed science specialist”
7. Agrometeorology information system development project AMISDP (BRRI Part)	GOB-World bank	2019-2020	Completed	Worked as agronomist

Section I

Participation in technology transfer systems, monitoring and evaluation

1. List of participation in technology transfer system

- Participation in seed production and multiplication program of BIRRI popular varieties through SPDP program
- Participation in radio talk about weed management in rice production
- Arrange field day among the farmers, Extension workers to disseminate the sustainable technology in rice production
- Work as a resource speaker in the farmers' and extension workers training at field level regarding Weed Management and modern technique of Rice production
- Conduct on- farm research in the farmers field about agronomic management and economic weed management in rice production
- Farmers training about modern rice production technology in upazilla level
- Resource speaker of Weed Management and modern technique of Rice production for scientist, extension personnel's and farmers

2. Monitoring/Evaluation:

- Participate as a member of field monitoring and evaluation team of PRA for evaluating need based research programme at different thanas of Rajshahi district
- Monitoring and evaluation and give suggestions, advice to the farmers in relation to rice production technologies in Gazipur district
- Monitoring and evaluation of Weed Management status in the farmers field in different districts of Bangladesh.
- Evaluated herbicide adoption in Comilla ,Faridpur and Barisal district
- Monitoring the pattern of weed population distributed in Comilla and Faridpur district.
- Monitoring weed management technologies adaptation in different district of Bangladesh
- Monitoring and evaluation of rice production activities in the farmers field and give suggestions and solutions of problems

Section J

Award/ Grand/ Scholarship

- 2017: **Achieved weed science award 2017** from weed science society of Bangladesh for outstanding contribution on weed science research and management
- 2022 : **Best paper presenter in an international conference** of weed science society of Bangladesh
- 2002: **Distinction in the Rice Production**, Communication and Office Management
- Training, BIRRI Gazipur
- 2009: **Scholarship/ grants from BIRRI** for pursuing PhD at BAU(Bangladesh Agricultural university)

Section K

Reviewer of journal

Rice journal, Bangladesh Agronomy journal, Bangladesh journal of weed science, Ecology journal and SARC journal

Section L

Supervision of MS student:

Already **5 MS student** were supervised from **SAU, BAU, BSMRAU**

Section M

Reviewer of journal

1. Rice journal
2. Bangladesh Agronomy journal
3. Bangladesh journal of weed science
4. Ecology journal

Section L

Member of the following society

- i) Life Member of Bangladesh Agronomy Society
- ii) Life Member of Weed Science Society of Bangladesh(WSSB)
- iii) Life member of Krishibid Institution of Bangladesh(KIB)
- iv) Life member of ecological society of Bangladesh

I certify that all information stated in this resume is true and complete to the best of my knowledge.

Dr. Md. Khairul Alam Bhuiyan
Principal Scientific Officer
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