

“Technology for new dimension”

Blurring of boundaries between the physical, digital, and biological worlds

Completion Report
on
Industrial Revolution 4.0 in
Agriculture

(24 July - 28 July 2022)



National Agriculture Training Academy (NATA)
Gazipur-1701

Course Management Team

Course Adviser & Course Director	Mahmudul Hasan Director General NATA, Gazipur
Course Coordinator	Dr. Muhammad Shahadat Hossain Siddiquee Senior Assistant Director NATA, Gazipur Cell Phone:01938615225
Assistant Course Coordinators	Md. Shahinul Islam Senior Assistant Director NATA, Gazipur Cell phone:01718425311
	Lupu Rahman Librarian NATA, Gazipur Cell phone:01717376172

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National Agriculture Training Academy (NATA)

The Academy

National Agriculture Training Academy (NATA) is the apex training institute for human resource development of officers (grade-9 and above) under the Ministry of Agriculture (MoA) for providing training on diversified fields of professional interest in agriculture sector. The Academy organizes various training programmes related to agriculture throughout the year. The academy is established in Gazipur as Central Extension Resources Development Institute (CERDI) on 14 March 1975 with the financial assistance of Japan International Cooperation Agency (JICA). Afterwards, on 27 June 1984, CERDI was undertaken to the Training Wing of Department of Agricultural Extension (DAE). On 03 April 2013, Government of the People's Republic of Bangladesh abolished CERDI and established NATA as an independent organization of MoA and on 07 June 2014, NATA has been started as a training academy.

Initially, the Academy started its functions with only 10 faculty members. Though Government approved strength is 184, at present NATA has 130 staff members including 27 faculty members.

Location

The Academy is 25 km away from Dhaka city and 3 km away from *Joydevpur Chandana Chowrasta* towards Gazipur district head quarter. It is located adjacent to Bangladesh Rice Research Institute (BRRI) and occupied 49 acres of land. The academy provides the trainees an ample scope to have free access to the adjacent institutions like Bangladesh Agriculture Research Institute (BARI), Bangladesh Rice Research Institute (BRRI), Seed Certification Agency (SCA), Bangabandhu Sheikh Mujibur Rahman Agricultural University (BSMRAU), Telecommunication College, and other government offices in Gazipur.

Vision

National Agriculture Training Academy becomes a center of excellence for developing competent human resources in agriculture sector.

Mission

We are pledged to achieve the shared vision through:

- i. Develop human resource of all organizations under MoA by imparting quality training, research and development and publications;
- ii. Enhance linkage between education, research and extension to endow agriculture service delivery system;
- iii. Network with reputed institution of home and abroad for organizational capacity building; and
- iv. Foster a culture of continuous learning for development of knowledge-intensive agriculture service.

Functions

The NATA has been entrusted to perform the following functions:

- i. Human resource development of the government, semi-government, autonomous organization under MoA through training of modern and sustainable agriculture technology;
- ii. Transfer modern and sustainable agriculture technology developed by the research organizations for the development of socio-economic conditions of farmers;
- iii. Conduct demonstration, adaptive research and research of proven technologies;
- iv. Impart all sorts of in-service training with special emphasis on induction, foundation and senior staff course;
- v. Exchange publications, participants and resource persons in seminars, workshops, conferences and training among the stakeholders;
- vi. Advice government and other organizations on training, achieving food and nutrition security, ICT, transfer of agriculture technology, agro-based industries and conservation environments etc.;
- vii. Help government and policy makers in framing and analyzing agricultural policies;
- viii. Conduct different training activities of academy in consonance with provision of the public administration training policy 2003; and
- ix. Perform all kinds of duties directed by the government.

Goals

The Academy has set some goals for achieving its vision and mission successfully. These are as follows:

- i. Human resource development of officers (grade-9 and above) under the MoA through training on diversified field of professional interest in agriculture sector
- ii. Conduct research and development (R&D), adaptive research, demonstration to improve training efficacy;
- iii. Provide publication and library service to facilitate quality training;
- iv. Impart all sorts of in-service training with special emphasis on induction, foundation and senior staff course;
- v. Help government and policy makers in framing and analyzing agricultural policies;
- vi. organize seminar, workshop, symposium and conference on various issues of national and sectoral interest

Course at a glance

Introduction

Industrial Revolution 4.0 in Agriculture training course is designed to develop the participants with necessary knowledge regarding 4IR, its challenges, opportunities and application in Agriculture sector. 4IR is characterized by the fusion of technologies that is blurring the line among physical, digital and biological spheres. After completion of the course participants will be able to understand the concept of upcoming 4IR, Agriculture 4.0 and its application in their respective working areas. The objective of this course is:

- To teach the participants about application of Industrial Revolution 4.0 in agriculture
- To illustrate about Internet of Things (IoT), Artificial Intelligence (AI) and cloud computing
- To Explain the participants about application of 4IR components
- To teach the participants project planning, resource mapping, manpower planning, Gantt chart and budget preparation.
- To teach the participants about stakeholder, draft project, cascading workshop, fund collection, challenge analysis.

Therefore, the officers of different organizations under the MoA need skills on different activities regarding Industrial Revolution 4.0 in Agriculture. The module on Industrial Revolution 4.0 in Agriculture has been prepared in order to help organizing training course by NATA for the personnel of different organizations under the Ministry of Agriculture. The training on Industrial Revolution 4.0 in Agriculture will help them to perform efficiently their jobs with technology related activities in order to achieve the dream of digital Bangladesh.

Learning Outcomes

After completion of training course the participants will be able to:

- Describe Basic components of IR 4.0 used in Agriculture;
- State Policy and Framework on 4IR;
- Narrate Challenges and Opportunities of 4IR;
- Get idea on Software and Hardware used in Agriculture 4.0 and 4IR;
- Get idea on Introduction to IoT and AI in 4IR and agriculture;
- Narrate Cloud computing and its application in agriculture;
- Gather knowledge about 4IR components;
- Identify the problem of execution to 4IR project; and
- Prepare draft project;

Number of participants: 30

Duration of the course: 05 days (24.07.2022 - 28.07.2022)

Course content

Module-1: Industrial Revolution 4.0 and Agriculture 4.0

Introduction to Industrial Revolution 4.0 and Agriculture 4.0
Basic components of IR 4.0 used in Agriculture
Policy and Framework on 4IR
Challenges and Opportunities of 4IR
Present Status of 4IR Technologies in Agriculture
Possible Application of 4IR Technologies in Agriculture of Bangladesh
Software and Hardware used in Agriculture 4.0 and 4IR

Module-2: Internet of Things (IoT), Artificial Intelligence (AI) and cloud computing

Introduction to IoT in 4IR and agriculture
Fundamentals of AI in 4IR and agriculture
Cloud computing and its application in agriculture

Module-3: 4IR project visit

Briefing and team formation
4IR project visit (BARI)
Group presentation

Module-4: Problem Analysis and Idea generation

Service enlistment regarding 4IR and presentation
Service prioritization and Problem identification addressing 4IR
Idea generation and Presentation

Module-5: Pilot Project Formulation

Formulation of pilot project planning
Gantt Chart Preparation
Budget preparation
Group presentation

Resource person and guest speaker

Sl. No.	Name & Designation	Address	Mobile No.
1	Moin Us Salam, National Consultant		01855871938
2	Dr. Hasan Muhammad Abdullah Associate Professor	Bangabandhu Sheikh Mujibur Rahman Agriculture Uniniversity, Gazipur.	01767695926
3	Dr. Muhammad Shahadat Hossain Siddiquee Senior Assistant Director	National Agriculture Training Academy (NATA), Gazipur	01938615225
4	Ashim Kumar Paul, A2I, ICT Division,	A2I, ICT Division,	01683123651
5	Md. Shahriar Bin Mohsin (Soikot) Mentor	iLab, A2I, ICT Division,	01819230965
6	Faruq Ahmed Jewel, Head of Technology	iLab, A2I, ICT Division,	01911311636
7	Muhammad Asif Atick CEO & Head	CRVS Project Cabinet Division	01714005887
8	Md. Shahinul Islam, Senior Assistant Director	National Agriculture Training Academy (NATA), Gazipur	01745997741
9	Lupu Rahman, Librarian	National Agriculture Training Academy (NATA), Gazipur	01769090390

Participant List

Sl.	Name & Designation	Workplace	Contact
1	Md. Monirul Islam Deputy Director (Diploma Education)	Department of Agricultural Extension (DAE), Training Wing, Khamarbari, Dhaka	01712948936
2	Shahana Begum Upazila Agriculture Officer	Department of Agricultural Extension (DAE), Akhaura, Brahmanbaria	01932350544
3	Mohammed Kutub Uddin Training Coordinator	Department of Agricultural Extension (DAE), Khamarbari, Dhaka	01712707328
4	Tanzila Rahman Agriculture Extension Officer	Department of Agricultural Extension (DAE), Gazipur Sadar, Gazipur	01571796680
5	Kamrun Nahar Mili Agriculture Extension Officer	Department of Agricultural Extension (DAE), Gazipur Sadar, Gazipur	01633037404
6	Sayed Shakil Ahmed Agriculture Extension Officer	Department of Agricultural Extension (DAE), Kapasias, Gazipur	01737681555
7	Abu Sayeed Md. Hasibuzzaman Scientific Officer	Bangladesh Institute of Nuclear Agriculture (BINA), Mymensingh	01521217767
8	Md. Al-Arafat Topu Scientific Officer	Bangladesh Institute of Nuclear Agriculture (BINA), Mymensingh	01735454480
9	Md. Nazmul Hasan Mehedi Scientific Officer	Bangladesh Institute of Nuclear Agriculture (BINA), Mymensingh	01739898728
10	Shamima Akter Senior Scientific Officer	Bangladesh Rice Research Institute (BRRI), Gazipur	01552338406
11	Dr. Mosammat Umma Kulsum Senior Scientific Officer	Bangladesh Rice Research Institute (BRRI), Gazipur	01720935933
12	Md. Humayun Kabir Baktiar Scientific Officer	Bangladesh Rice Research Institute (BRRI), Gazipur	01715752403
13	Md. Shawkat Hossain Bhuiyan Deputy Director (Planning, Evaluation & Implementation)	Seed Certification Agency (SCA), Gazipur	01913191836
14	Farhana Jenny Sample Collection Officer	Seed Certification Agency (SCA), Gazipur	01832094206
15	Aminur Rashid District Seed Certification Officer	Seed Certification Agency (SCA), Narayanganj	01712711584
16	Md. Zinnurain Khan Executive Engineer	Barind Multipurpose Development Authority (BMDA), Kurigram Region, Kurigram	01727787124
17	Muhammad Kamruzzaman Assistant Engineer	Barind Multipurpose Development Authority (BMDA), Sirajgonj Zone, Sirajgonj	01817509201
18	Md. Mofazzal Hossain Assistant Engineer	Barind Multipurpose Development Authority (BMDA), Rangpur Zone, Rangpur	01718041773
19	H.E.M. Khairul Mazed	RARS, Bangladesh Agricultural Research Institute	01712657393

Sl.	Name & Designation	Workplace	Contact
	Scientific Officer	(BARI), Jamalpur	
20	Md. Ariful Islam Scientific Officer	Bangladesh Agricultural Research Institute (BARI), Gazipur	01719134124
21	Md. Abdullah Al Malek Scientific Officer	HARS, Bangladesh Agricultural Research Institute (BARI), Khagrachari	01511734874
22	Sarker Mohammad Rasel Senior Scientific Officer	Soil Resource Development Institute (SRDI), Central Laboratory, Dhaka	01721716086
23	Rafeza Begum Senior Scientific Officer	Soil Resource Development Institute (SRDI), Regional Laboratory, Mymensingh	01913515894
24	Maniruzzaman Senior Scientific Officer	Soil Resource Development Institute (SRDI), Regional Laboratory, Kishoregonj	01716660677
25	Md. Selim Haider Manager (Farm)	Bangladesh Agricultural Development Corporation (BADC), Dhaka	01711146089
26	Hussain Mohammad Khaledujjaman Assistant Chief Engineer	Bangladesh Agricultural Development Corporation (BADC), Dhaka	01723203703
27	Dr. Md. Jamal Uddin Deputy Director	National Agriculture Training Academy (NATA), Gazipur	01712272859
28	Lialatul Rokshana Lima Senior Assistant Director	National Agriculture Training Academy (NATA), Gazipur	01714612029
29	Ummey Habiba Senior Assistant Director	National Agriculture Training Academy (NATA), Gazipur	01913834183
30	Dr. Md. Shahiduzzaman Shubho Medical Officer	National Agriculture Training Academy (NATA), Gazipur	01763037171

Training method and material

a) Method

Lecture and discussion, field visit, group work, question & answer, etc.

b) Material

Multimedia, white board & marker, different sample, etc.

Course evaluation by the participants

কোর্স মূল্যায়ন প্রশ্নপত্র (সার্বিক)

১. বিষয়বস্তুর দিক থেকে প্রশিক্ষণ কোর্সটি কি পর্যাপ্ত?

পর্যাপ্ত ১৪ জন	মোটামুটি ১৭ জন	অপর্যাপ্ত ২ জন
৪১.৯৪%	৫১.৬১%	৬.৪৫%

২. কোর্সের সময়কাল কিরূপ?

খুবই দীর্ঘ ০৫ জন	পর্যাপ্ত ১৮ জন	মোটামুটি ১৪ জন
১০.৪৮%	৫১.৬১%	৪৫.৯০%

৩. প্রশিক্ষণ কর্মসূচিতে অন্তর্ভুক্ত (ক্লাস রুটিন অনুযায়ী) কোন বিষয়গুলো আপনার ভাল লেগেছে?

- Basic components of IR 4.0 with the Applications in Agriculture
- Present Status of 4IR Technologies in Agriculture
- Possible Application of 4IR Technologies in Agriculture of Bangladesh
- Software and Hardware of agriculture 4.0 and 4IR
- Fundamentals of AI in 4IR and Agriculture
- Cloud Computing and its Application in Agriculture
- IoT in 4IR and Agriculture
- Formulation of Pilot Project Proposal on 4IR
- Budget Preparation for the 4IR Project

৪. প্রশিক্ষণ কর্মসূচিতে অন্তর্ভুক্ত (ক্লাস রুটিন অনুযায়ী) বিষয় ছাড়াও আরও অতিরিক্ত বিষয় অন্তর্ভুক্ত করা দরকার মনে করেন?

- Practical Session of 4IR Components
- Field Visit- 2 days
- 4IR related of mobile apps
- Application of IoT's in smart land area and less educated farmers
- Assignments and presentations

৫. প্রশিক্ষণ কর্মসূচিতে অন্তর্ভুক্ত যে সমস্ত বিষয় (যদি থাকে) বাতিল করা দরকার মনে করেন (সেগুলো উল্লেখ করুন)

- Repetition of 4IR introduction
- History of the 4th agricultural revolution, requirement and types of revolution in agriculture
- Agriculture business management and financial risk analysis, financing, funding and management

৬. আপনি কতটা শিখেছেন?

খুবই ভাল ৮ জন

২২.৫৮%

ভাল ১৬ জন

৪৮.৩৯%

মোটামুটি ৯ জন

২৯.০৩%

৭. আপনার চাকুরিতে প্রশিক্ষণের প্রাসংগিকতা কেমন ছিল?

খুবই প্রাসংগিক- ২৩ জন ___ ৭০.৯৬%

মোটামুটি প্রাসংগিক- ৭ জন ___ ২২.৫৮%

কোন কোন ক্ষেত্রে প্রাসংগিক- ৩ জন ___ ৬.৪৬%

৮. এ কোর্সে থেকে নিম্নলিখিত কোন কোন সুবিধা পেয়েছেন?

জ্ঞান ও তথ্য সম্পর্কে অবগত হওয়া: ২৮ জন ___ ৯০.৩২%

কাজ করার জন্য বিশেষ ক্ষমতা ও পদ্ধতি জানা: ১৯ জন ___ ৬১.১৯%

সুষ্ঠুভাবে কাজ করার ক্ষমতা অর্জন করা: ১৪ জন ___ ৪৫.১৬%

কনফিডেন্সের মাত্রা বেড়েছে: ২৪ জন ___ ৭৪.৪২%

৯. আপনার মতে কোর্সের প্রশিক্ষণ পদ্ধতি হিসেবে কোনটি বেশি কার্যকর?

ক্লাস লেকচার: ১৪ জন ___ ৪৫.১৬%

আলোচনা ও অনুশীলন: ২২ জন ___ ২০.৯৭%

দলগত আলোচনা: ১৭ জন ___ ৫৮.৮৪%

দলগত সমস্যা সমাধান: ২২ জন ___ ৭০.৯৭%

মাঠ পরিদর্শন: ২৬ জন ___ ৮৩.৮৭%

ফিল্মশো: ১০ জন ___ ৩২.২৬%

অন্যান্য: ২ জন ___ ৬.৪৫%

১০. কোর্সের ব্যবস্থাপনা কেমন ছিল?

খুবই সন্তোষজনক: ৬ জন ___ ১২.৯০%

সন্তোষজনক: ২৪ জন ___ ৬৭.৭৪%

সন্তোষজনক নয়: ৩ জন ___ ৬.৪৫%

১১. প্রশিক্ষণের কোন দিক আপনার ভাল লেগেছে?

- Time management
- Environment and discipline
- Class review
- New module
- Group practice
- Participatory attitude
- Presentation of lecture
- Field Visit, accommodation
- Cordiality of course management
- Course topic/curriculum
- Group work
- Speaker selection
- Magazine Writing

১২। প্রশিক্ষণের কোন দিক আপনার ভালো লাগেনি ?

ক) Interrupted electricity supply

খ) Very short break time.

১৩। কোর্স উন্নয়নের ব্যাপারে আপনার অভিমত রাখুন ?

ক) Theory class followed by practical class

খ) More time for Q & A

গ) More practical classes

ঘ) Case study on real experience

ঙ) Increase recreation and other facilities

চ) Uninterrupted electricity supply

১৪। আপনার অভিমত দিন।

ক্র. নং	কর্মসম্পাদনা সূচক	অসাধারণ ১০০%		অতি উত্তম ৯০%		উত্তম ৮০%		চলতি মান ৭০%		চলতি মানের নিম্নে ৬০%	
		জন	%	জন	%	জন	%	জন	%	জন	%
ক.	নিরবচ্ছিন্ন প্রশিক্ষণ সুবিধা	৪	১৩.৩	১২	৩৬.৬	১৪	৪৬.৬	৩	৬.৬	-	-
খ.	পরিচ্ছন্নতা	৩	১০	১৩	৩৬.৬	১৩	৩৬.৬	৪	১৩.৩	-	-
গ.	সুষ্ঠু খাবার ব্যবস্থাপনা	৫	১০	৯	২৩.৩	১২	৪০	৭	২৩.৩	-	-
ঘ.	লাইব্রেরী সুবিধা	৫	১১	৮	২০	১০	২৩.৩	৫	১৬.৬	৫	১৬.৬
ঙ.	অডিও ভিজুয়াল সুবিধা	৩	১০	১২	৩০	১৪	৩৩.৬	৩	১০	১	৩.৩

Speaker Evaluation by Participants

Lesson	Lesson Topic/Event	Session (Hrs)	Speaker /Facilitator /CMT	Total	Average
1	Introduction to Industrial Revolution 4.0 and Agriculture 4.0	1	Dr. Muhammad Shahadat Hossain Siddiquee, Senior Assistant Director, NATA, 01753896598	185.8	5.63
2	Basic components of IR 4.0 with the Applications in Agriculture	1	Moin Us Salam, National Consultant 01855871938	187.4	5.67
3	Policy and Framework on Industrial Revolution 4.0	1	Moin Us Salam	185.8	5.63
4	Challenges and Opportunities of 4IR	1	Ashim Kumar Paul, A2I, ICT Division, 01683123651	177.4	5.37
5	Introduction to IoT in 4IR and agriculture (Theory)	1	Ashim Kumar Paul	185.8	5.63
6	Present Status of 4IR Technologies in Agriculture	1	Dr. Muhammad Shahadat Hossain Siddiquee, Sr. AD, NATA	187.4	5.67
7	Possible Application of 4IR Technologies in Agriculture of Bangladesh	1	Dr. Hasan Muhammad Abdullah Associate Professor, BSMRAU	185.8	5.63
8	Software and Hardware used in Agriculture 4.0 and 4IR	1	Dr. Hasan Muhammad Abdullah	177.4	5.37
9	Fundamentals of AI in 4IR and Agriculture	1	Md. Shahriar Bin Mohsin (Soikot) Mentor, iLab, a2i,	185.8	5.63
10	Cloud Computing and its Application in Agriculture	1	Md. Shahriar Bin Mohsin (Soikot)	187.4	5.67
11	Briefing and Team Formation for Field Visit	1	Dr. Muhammad Shahadat Hossain Siddiquee, Sr. AD, NATA	185.8	5.63
12	4IR Project Visit (BARI)	3	Dr. Muhammad Shahadat Hossain Siddiquee	177.4	5.37
13	IoT in 4IR and Agriculture (Practical)	1	Dr. Md. Asaduzzaman, SSO, BARI Gazipur,	185.8	5.63
14	Group Presentation on visit	2	CMT	187.4	5.67
15	Service Enlistment Regarding 4IR and Presentation	2	Faruq Ahmed Jewel, Head of Technology, a2i,	185.8	5.63
16	Service Prioritization and Problem Identification Addressing 4IR	2	Faruq Ahmed Jewel	177.4	5.37
17	Idea Generation and Presentation	1	Faruq Ahmed Jewel	185.8	5.63
18	Idea Generation and Presentation	1	Md. Shahinul Islam, Senior Assistant Director, NATA	187.4	5.67
Event	Library Orientation	1	Lupu Rahman, Librarian, NATA, Gazipur,	185.8	5.63
19	Formulation of Pilot Project Proposal on 4IR	1	Muhammad Asif Atick CEO & Head, CRVS Project Cabinet Division	177.4	5.37
20	Gantt Chart Preparation for the 4IR Project	1	Muhammad Asif Atick	185.8	5.63
21	Budget Preparation for the 4IR Project	1	Muhammad Asif Atick	187.4	5.67

Evaluation test report (Full marks -50)

Sl.	Name & Designation	Workplace	Evaluation Marks	
			Pre	Post
1	Md. Monirul Islam Deputy Director (Diploma Education)	Department of Agricultural Extension (DAE), Training Wing, Khamarbari, Dhaka	18	33
2	Shahana Begum Upazila Agriculture Officer	Department of Agricultural Extension (DAE), Akhaura, Brahmanbaria	19	35
3	Mohammed Kutub Uddin Training Coordinator	Department of Agricultural Extension (DAE), Khamarbari, Dhaka	07	33
4	Tanzila Rahman Agriculture Extension Officer	Department of Agricultural Extension (DAE), Gazipur Sadar, Gazipur	10.5	31
5	Kamrun Nahar Mili Agriculture Extension Officer	Department of Agricultural Extension (DAE), Gazipur Sadar, Gazipur	10.5	34
6	Sayed Shakil Ahmed Agriculture Extension Officer	Department of Agricultural Extension (DAE), Kapasias, Gazipur	06	35
7	Abu Sayeed Md. Hasibuzzaman Scientific Officer	Bangladesh Institute of Nuclear Agriculture (BINA), Mymensingh	20	38
8	Md. Al-Arafat Topu Scientific Officer	Bangladesh Institute of Nuclear Agriculture (BINA), Mymensingh	9.5	37
9	Md. Nazmul Hasan Mehedi Scientific Officer	Bangladesh Institute of Nuclear Agriculture (BINA), Mymensingh	19	39
10	Shamima Akter Senior Scientific Officer	Bangladesh Rice Research Institute (BRRI), Gazipur	03	38
11	Dr. Mosammat Umma Kulsum Senior Scientific Officer	Bangladesh Rice Research Institute (BRRI), Gazipur	6.5	41
12	Md. Humayun Kabir Baktiar Scientific Officer	Bangladesh Rice Research Institute (BRRI), Gazipur	7.5	39
13	Md. Shawkat Hossain Bhuiyan Deputy Director (Planning, Evaluation & Implementation)	Seed Certification Agency (SCA), Gazipur	18	35
14	Farhana Jenny Sample Collection Officer	Seed Certification Agency (SCA), Gazipur	15	35
15	Aminur Rashid District Seed Certification Officer	Seed Certification Agency (SCA), Narayanganj	11	32
16	Md. Zinnurain Khan Executive Engineer	Barind Multipurpose Development Authority (BMDA), Kurigram Region, Kurigram	08	31
17	Muhammad Kamruzzaman Assistant Engineer	Barind Multipurpose Development Authority (BMDA), Sirajgonj Zone, Sirajgonj	10.5	38
18	Md. Mofazzal Hossain Assistant Engineer	Barind Multipurpose Development Authority (BMDA), Rangpur Zone, Rangpur	26	35
19	H.E.M. Khairul Mazed Scientific Officer	RARS, Bangladesh Agricultural Research Institute (BARI), Jamalpur	18	44

Sl.	Name & Designation	Workplace	Evaluation Marks	
			Pre	Post
20	Md. Ariful Islam Scientific Officer	Bangladesh Agricultural Research Institute (BARI), Gazipur	15	42
21	Md. Abdullah Al Malek Scientific Officer	HARS, Bangladesh Agricultural Research Institute (BARI), Khagrachari	07	38
22	Sarker Mohammad Rasel Senior Scientific Officer	Soil Resource Development Institute (SRDI), Central Laboratory, Dhaka	08	39
23	Rafeza Begum Senior Scientific Officer	Soil Resource Development Institute (SRDI), Regional Laboratory, Mymensingh	31.5	37
24	Maniruzzaman Senior Scientific Officer	Soil Resource Development Institute (SRDI), Regional Laboratory, Kishoregonj	21	34
25	Md. Selim Haider Manager (Farm)	Bangladesh Agricultural Development Corporation (BADC), Dhaka	19	41
26	Hussain Mohammad Khaledujjaman Assistant Chief Engineer	Bangladesh Agricultural Development Corporation (BADC), Dhaka	07	29
27	Dr. Md. Jamal Uddin Deputy Director	National Agriculture Training Academy (NATA), Gazipur	21	36
28	Lialatul Rokshana Lima Senior Assistant Director	National Agriculture Training Academy (NATA), Gazipur	9.5	36
29	Ummey Habiba Senior Assistant Director	National Agriculture Training Academy (NATA), Gazipur	18	31
30	Dr. Md. Shahiduzzaman Shubho Medical Officer	National Agriculture Training Academy (NATA), Gazipur	4.5	39

TRAINING SCHEDULE

Course Title: **Industrial Revolution 4.0 in Agriculture**

Duration: 05 Days (24-28 July, 2022)

Participant: 9th grade & above officers of different organizations under MoA

Day-01: 24/07/2022

Time	Topics	Speakers
09.00-09:30	Registration and Pre-evaluation	CMT/Sadikun Nahar Lucky
09.30-10.00	Inaugural Session	Director General/Director/ Deputy Director/ CMT
10.00-11.00	Introduction to Industrial Revolution 4.0 and Agriculture 4.0	Dr. Muhammad Shahadat Hossain Siddiquee Senior Assistant Director, NATA 01753896598
11.00-11.30	Tea break	
11.30-12.30	Basic components of IR 4.0 with the Applications in Agriculture	Moin Us Salam National Consultant 01855871938
12.30-13.30	Policy and Framework on Industrial Revolution 4.0	Do
13.30-14.30	Lunch and prayer	
14.30-15.30	Challenges and Opportunities of 4IR	Ashim Kumar Paul A2I, ICT Division 01683123651
15.30-16.30	Introduction to IoT in 4IR and agriculture (Theory)	Do
16.30-17.30	Library Orientation	Lupu Rahman Librarian, NATA, Gazipur

Day-02: 25/07/2022

Time	Topics	Speaker
09.00-10.00	Present Status of 4IR Technologies in Agriculture	Dr. Muhammad Shahadat Hossain Siddiquee Senior Assistant Director, NATA
10.00-11.00	Possible Application of 4IR Technologies in Agriculture of Bangladesh	Dr. Hasan Muhammad Abdullah Associate Professor, BSMRAU 01767695926
11.00-11.30	Tea Break	
11.30-12.30	Software and Hardware used in Agriculture 4.0 and 4IR	Do
12.30-13.30	Fundamentals of AI in 4IR and Agriculture	Md. Shahriar Bin Mohsin (Soikot) Mentor, iLab, a2i 01819230965
13.30-15.00	Lunch and prayer	
15.00-16.00	Cloud Computing and its Application in Agriculture	Do
16.00-17.00	Briefing and Team Formation for Field Visit	Dr. Muhammad Shahadat Hossain Siddiquee Sr. AD, NATA
17.00-17.30	Tea Break	

Day-03: 26/07/2022

Time	Topics	Speaker
09.00-10.00	4IR Project Visit (BARI/BRRI/BSMRAU)	CMT/Representatives
10.00-11.00	Do	Do
11.00-11.30	Tea Break	
11.30-12.30	Visit Continue	CMT/Representatives
12.30-13.30	IoT in 4IR and Agriculture (Practical)	Dr. Md. Asaduzzaman SSO, BARI, Gazipur 01718131545
13.30-15.00	Lunch and prayer	
15.00-16.00	Group Presentation	CMT/Representatives
16.00-17.00	Do	Do
17.00-17.30	Tea Break	

Day-04: 27/07/2022

Time	Topics	Speaker
09.00-10.00	Service Enlistment Regarding 4IR and Presentation	Faruq Ahmed Jewel, Head of Technology, a2i 01911311636
10.00-11.00	Do	Do
11.00-11.30	Tea Break	
11.30-12.30	Service Prioritization and Problem Identification Addressing 4IR	Faruq Ahmed Jewel Technology, a2i
12.30-13.30	Do	Do
13.30-15.00	Lunch and prayer	
15.00-16.00	Idea Generation and Presentation	Faruq Ahmed Jewel Technology, a2i
16.00-17.00	Do	Md. Shahinul Islam Senior Assistant Director NATA, Gazipur
17.00-17.30	Tea Break	

Day-05: 28/07/2022

Time	Topics	Speaker
09.00-10.00	Formulation of Pilot Project Proposal on 4IR	Muhammad Asif Atick CEO & Head, CRVS Project Cabinet Division 01714005887
10.00-11.00	Gantt Chart Preparation for the 4IR Project	Do
11.00-11.30	Tea Break	
11.30-12.30	Budget Preparation for the 4IR Project	Do
12.30-13.30	Post Evaluation	CC/ ACC
13.30-15.00	Lunch Prayer	
15.00-16.00	Course Evaluation	CC/ ACC
16.00-17.00	Closing Ceremony	Director General/Director/CMT

Pictorial View of Training Activities