

# TRAINING COMPLETION REPORT

## Training Course On 'Eco-Friendly Plant Protection Technology'



25-29 November, 2018



National Agriculture Training Academy  
Gazipur-1701



**Training Course**  
**On**  
**‘Eco-Friendly Plant Protection Technology’**

**25-29 November, 2018**

**Course Management**

Course Adviser & Director:

Dr. Md. Abu Sayeed Miah  
Director General (In charge)  
National Agriculture Training Academy (NATA)  
Gazipur-1701  
☎ 9263298

Course Co-ordinator:

Md. Jamal Uddin  
Deputy Director (Entomology)  
National Agriculture Training Academy (NATA)  
Gazipur-1701  
Cell: 01718214607

Assistant Course Co-ordinator

Md. Saiful Islam  
Senior Assistant Director,  
NATA, Gazipur.  
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Assistant Course Co-ordinator

Mst. Sharmin Akhter  
Senior Assistant Director,  
NATA, Gazipur.  
Cell: 01711736571



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Eco-friendly agriculture is just a comprehensive agricultural production system intensively engaged in accordance with the principles of ecology. The

practices that are used in ecological agriculture are known as eco friendly agricultural practice. Eco- friendly agriculture is mainly organic, mechanical, physical and cultural practices of agriculture. (Joshi and Prabhakarasetty, 2005). Eco friendly agriculture also describes landscapes that support both agricultural production and biodiversity conservation, working in harmony together to improve the livelihoods of rural communities.

A recent investigation by the Food and Agriculture Organization (FAO) on the current status of land productivity in Bangladesh revealed that there is a general trend towards declining or stagnating crop yields. These adverse trends are considered to be the result of intensive cropping through indiscriminate use of fertilizers and pesticides, continuous use of irrigation water, total removal of biomass from the agricultural fields and some other activities. These have generated new sets of problems such as soil erosion, loss of soil fertility, deficiencies of sulphur and zinc, etc. (Anon,1991).

The crop land of Bangladesh has been losing its fertility by using anti- natural practices like chemical fertilizers and chemical pesticides. Murakami (1991) stated that the anti- natural agricultural practices degrade the soil and ecological balance in many ways resulting poor output. The anti-natural practices increase the cost of production in one hand and decrease the microbial activities of the soil on the other, which creates new hazardous situation in the entire crop production system including health hazards. Chemical fertilizers and chemical pesticides not only contaminate surface water, they also affect fish population and health as well.

Environmental pollution by chemical fertilizers and pesticides is posing a serious threat worldwide. Their continuous usage may destroy the beneficial soil micro flora. Intensive use of inorganic chemical fertilizers and pesticides resulted in the contamination of soil, surface and ground water with harmful chemicals and accumulation of heavy metals. Uptake of heavy metals like Cd, Cu, Mn and Zn by plants is proportionate to the increasing level of soil contamination. People who consume these plant products are at risk of adverse health effects. Cadmium and lead are the elements of major concern due to their accumulation potential and

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toxic effects in the plants and animals. Crops such as spinach, lettuce, carrot, radish, and zucchini can accumulate heavy metals in their tissues.



To regain the ecological status it is high time for judicious use of agro-chemicals i.e. removal of agro-chemicals in crop production by giving the emphasis on eco-friendly practices mainly, organic, mechanical, physical and cultural practices. Government became very much concerned about the devastating impact of imbalanced use of agro-chemical and earnestly felt the need for developing the alternative strategies practices that is sustainable productive and environmentally friendly intervention. In the vision 2020, Department of Agricultural Extension introduced the New Agricultural Extension Policy (NAEP) which stated from 1996.

It consists of 11 components; among these one component is “The attention to environmental condition” in crop production. Removal of the use of agro-chemicals by encouraging eco-friendly agricultural farming is steadily gaining popularity through the world and there are strong organic movement every where in Europe and North America. (Joshi and Prabhakarasetty, 2005).

Gradually Bangladesh government is recognizing the removal of agro-chemicals by interventions with different eco-friendly agricultural practices in crop production. Eco-friendly practices can make major positive impact on environment (Mc Robie, 1990). Now a days’ government extension provider of Bangladesh, like DAE is working with projects all over the country. Every project has the major attention on environmental consideration in crop production by removal or reducing agro-chemicals. Some of the NGOs, private extension providers, provide various types of training on eco-friendly agricultural practice for their group members and ICM members, other than 140 days training for ICM farmers by ICM project both DAE and NGOs providing continuous training and other input facilities to the ICM members to increase their knowledge and to form a favorable attitude and adoption towards eco-friendly agricultural practices in crop production.

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#### **COURSE OBJECTIVE**

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- Enhance environmental quality and natural resources.

- Satisfy human food and clothing (cotton, wool, leather) needs.
- Employ natural and biological controls for pests and disease.
- Enhance the quality of life of farmers and society as a whole.

## COURSE CONTENT

No.	TOPIC	METHOD
1	Eco-friendly Plant Protection Technology in Bangladesh: An overview with special reference to pest management.	L & D
2	Application of Eco-friendly approach in crop disease management in Bangladesh: An example in relation to lentil <i>Stemphylium</i> blight disease.	L & D
3	An Orientation to the major insect pests and diseases of different crops (Visit pest museum).	L, D & P
4	Major diseases of Mango, Jackfruit and Banana and their eco-friendly management.	L & D
5	Major diseases of Guava, Papaya, Coconut and Litchi and their eco-friendly management.	L & D
6	Introduction to beneficial insects & pathogens and Biological control measures.	L & D
7	Major insect pest of Jute, Cotton & Sugarcane and their eco-friendly management.	L & D
8	Climate change and its effects on insect pest populations.	L & D
9	Concept and principles of IPM. Adverse effect and residual effect of pesticides and its risk reduction	L & D
10	Major insect pests of mango, guava and litchi and their eco-friendly management.	L & D
11	Major insect pests of Banana, Papaya and jackfruit and their eco-friendly management.	L & D
12	Major diseases of Jute, Cotton & Sugarcane and their eco-friendly management.	L & D
13	Major diseases of pulse and oil seed crops and their eco-friendly management	L & D

...Table Contd.

No.	TOPIC	M... <sup>5</sup> HOD
14	Major diseases of Cucurbits, Cabbage, Cauliflower and Bean and their eco-friendly management.	L & D



15	Briefly describe the life cycle, nature of damage and eco-friendly management of Rice Stem borer, Gall midge, Leaf folder and case worm.	L & D
16	Pesticide regulation and pesticide using pattern in Bangladesh. An impact analysis of pesticide use due to eco-friendly practices.	L & D
17	Digital documentation of insect pest and disease specimen and its use, preservation and presentation.	L ,D & E
18	Introduction to insect pests of rice such as BPH, Rice bug, Rice hispa, Whorl maggot and Ear cutting caterpillar and their eco-friendly management.	L & D
19	Augmentation and Conservation of Natural Enemy ( N/E)	L & D
20	Bio-ecology of rat and its integrated management practices.	L & D
21	Major insect pests of Brinjal, Tomato, oil seed & pulse crops and their integrated management	L & D
22	Major insect pests of Cucurbit, Cabbage, Cauliflower and Bean crops and their eco-friendly management.	L & D
23	Major diseases of rice (Tungro, Ufra, Brown spot and False smut) and their eco-friendly management.	L & D
24	Major diseases of rice ( Blast, BLB, Sheath blight and Sheath rot) and their eco-friendly management	L & D
25	Safe use and handling of pesticides in fruits and vegetables.	L & D
26	Type of pesticides, their mode of action and common pesticides using in Bangladesh.	L & D
27	Diseases of Potato, Brinjal and Tomato & their eco-friendly management.	L & D
28	Major stored grain pests and their eco-friendly management system.	L & D

NB. L = Lecture, D = Discussion, E = Exercise & P = Practise.

## TRAINING SCHEDULE

**Date: 25/11/2018**

**Day-01: Sunday**

Time	Topic	Speaker
8.30-9.00	Registration	Sadiqunnahar (Lucky), Demonstrator (Lab.)
9.00-9.30	Pre-Evaluation Test	CC/ACC
9.30-10.00	Inaugural Ceremony	DG/Faculties / CC /ACC

<del>10.00-11.00</del>	<del>Eco-friendly Plant Protection Technology in Bangladesh: An overview with special</del>	<del>Dr. Md. Ashik Iqbal Khan Senior Scientific Officer</del>
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	reference to pest management.	BRRRI, Gazipur
11.00-11.20	Tea Break	
11.20 - 12.20	Application of Eco-friendly approach in crop disease management in Bangladesh: An example in relation to lentil <i>Stemphylium</i> blight disease.	Dr. Md. Ashik Iqbal Khan Senior Scientific Officer BRRRI, Gazipur
12.25-1.25	An Orientation to the major insect pests and diseases of different crops (Visit pest museum).	Md. Jamal Uddin DD (Entomology), NATA, Gazipur Cell: 01718214607
1.25-2.30	Prayer & Lunch	
2.30-3.30	Major diseases of Mango, Jackfruit and Banana and their eco-friendly management.	Dr. Ashraf Uddin Ahammed PSO, BARI, Gazipur. Cell: 01711117724
3.35-4.35	Major diseases of Guava, Papaya, Coconut and Litchi and their eco-friendly management.	Dr. Ashraf Uddin Ahammed PSO, BARI, Gazipur. Cell: 01711117724
4.35-5.00	Evening Tea	

**Date: 26/11/2018**

**Day-02: Monday**

Time	Topic	Speaker
9.00-9.15	Review of the previous day	Md. Saiful Islam Sr. AD, NATA
9.15-10.15	Introduction to beneficial insects & pathogens and Biological control measures.	Dr. Md. Abdul Mazed DD (LR), NATA, Gazipur. Cell: 01814849190
10.20-11.20	Major insect pest of Jute, Cotton & Sugarcane and their eco-friendly management.	Dr. Selina Akhter PSO,BSRI, Gazipur. Cell: 01716089694
11.20-11.40	Tea Break	
11.45 - 12.45	Climate change and its effects on insect pest populations.	Prof. Dr.Md. Ruhul Amin, BSMRAU , Gazipur. Cell: 01711548416

12.50 - 1.50	Concept and principles of IPM. Adverse effect and residual effect of pesticides and	Prof. Dr.Md. Ruhul Amin, Dept. of Entomology, BSMRAU , Gazipur.
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	its risk reduction	Cell: 01711548416
1.50 – 2.50	Prayer & Lunch	
2.50-3.45	Major insect pests of mango, guava and litchi and their eco-friendly management.	Dr. Debasish Sarker PSO, Division of Entomology, BARI, Gazipur. Cell: 01712274933
3.50-4.50	Major insect pests of Banana, Papaya and jackfruit and their eco-friendly management.	Dr. Debasish Sarker PSO, Division of Entomology, BARI, Gazipur. Cell: 01712274933
4.50-5.00	Evening Tea	

**Date: 27/11/2018**

**Day-03 : Tuesday**

<b>Time</b>	<b>Topic</b>	<b>Speaker</b>
9.00-9.15	Review of the previous day	Md. Saiful Islam Sr. AD, (ACC) NATA, Gazipur
9.15-10.15	Major diseases of Jute, Cotton & Sugarcane and their eco-friendly management.	Dr. Selina Parvin CSO & Head (Pathology) BARI, Gazipur. Cell : 01916841302
10.20-11.20	Major diseases of pulse and oil seed crops and their eco-friendly management	Dr. Selina Parvin CSO & Head (Pathology) BARI, Gazipur. Cell : 01916841302
11.20 -11.40	Tea Break	
11.45 -12.45	Major diseases of Cucurbits, Cabbage, Cauliflower and Bean and their eco-friendly management.	Dr. Md. Siddiqur Rahman SSO, BARI, Gazipur. Cell : 01711277230
12.50 -1.50	Briefly describe the life cycle, nature of damage and eco-friendly management of Rice Stem borer, Gall midge, Leaf folder and case worm.	Dr. Md. Abdul Mazed DD(LR), NATA, Gazipur. Cell: 01814849190
1.50-2.50	Prayer & Lunch	
2.50-3.40	Pesticide regulation and pesticide using pattern in Bangladesh. An impact analysis of pesticide use due to eco-friendly practices.	Dr. Md. Abdul Mazed DD(LR), NATA, Gazipur. Cell: 01814849190

3.50-4.40	Digital documentation of insect pest and disease specimen and its use,	Md. Shahadat Hossain Siddique
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	preservation and presentation.	Sr. AD, NATA, Gazipur. Cell: 01753896598
4.50-5.40	Introduction to insect pests of rice such as BPH, Rice bug, Rice hispa, Whorl maggot and Ear cutting caterpillar and their eco-friendly management.	Md. Shahadat Hossain Siddique Sr. AD, NATA, Gazipur. Cell: 01753896598
5.40-6.00	Evening Tea	

**Date: 28/11/2018**

**Day-04 : Wednesday**

<b>Time</b>	<b>Topic</b>	<b>Speaker</b>
9.00-9.15	Review of the previous day	Md. Jamal Uddin DD ( Entomology) & CC NATA, Gazipur.
9.15-10.15	Augmentation and Conservation of Natural Enemy ( N/E)	Dr. Md. Abdul Mazed DD (LR), NATA, Gazipur. Cell: 01814849190
10.20 - 11.20	Bio-ecology of rat and its integrated management practices.	Dr. Md. Abdul Mazed DD(LR), NATA, Gazipur. Cell: 01814849190
11.20 - 11.40	Tea Break	
11.45-12.45	Major insect pests of Brinjal, Tomato, oil seed & pulse crops and their integrated management.	Dr. Md. Sultan Ahmed, PSO, Division of Entomology, BARI, Gazipur, Cell : 01711242901
12.50-1.45	Major insect pests of Cucurbit, Cabbage, Cauliflower and Bean crops and their eco-friendly management.	Dr. Md. Sultan Ahmed, PSO, Division of Entomology, BARI, Gazipur, Cell : 01711242901
1.50-2.50	Prayer & Lunch	
2.50-3.35	Major diseases of rice (Tungro, Ufra, Brown spot and False smut) and their eco-friendly management.	Dr. M.A. Latif CSO & Head (PlantPathology Division) BRRI.Gazipur. Cell: 01715034094
3.40-4.25	Major diseases of rice ( Blast, BLB, Sheath blight and Sheath rot) and their eco-friendly management	Dr. M.A. Latif CSO & Head (PlantPathology Division) BRRI.Gazipur. Cell: 01715034094
4.30-5.00	Evening Tea	

**Date: 29/11/2018**

**Day-5 : Thursday**



<b>Time</b>	<b>Topic</b>	<b>Speaker</b>
9.00-9.15	Review of the previous day.	Sharmin Akhter, Sr. AD & ACC NATA, Gazipur.
9.15-10.15	Safe use and handling of pesticides in fruits and vegetables.	Dr. Md. Sultan Ahmed, PSO, BARI, Gazipur, Cell : 01711242901
10.20-11.20	Type of pesticides, their mode of action and common pesticides using in Bangladesh.	Dr. Md. Sultan Ahmed, PSO, BARI, Gazipur, Cell : 01711242901
11.20 - 11.40	Tea Break	
11.45 - 12.45	Diseases of Potato, Brinjal and Tomato & their eco-friendly management.	Dr. Md. Sayedur Rahman DD (Admin.), NATA, Gazipur. Cell: 01552495564
12.50 -2.20	Prayer & Lunch	
2.20 -3.20	Major stored grain pests and their eco-friendly management system.	Jharna Begum Sr. AD, NATA, Gazipur. Cell: 01838091834
3.30 - 4.00	Post-Evaluation Test	CC/ACC
4.00 - 4.45	Closing Ceremony with awarding certificate	DG/Faculties/Course Co-ordinator/ACC
4.45-5.00	Evening Tea	

### LIST OF ALL TRAINEE'S

<b>Sl. No.</b>	<b>NAME OF THE TRAINEE'S</b>	<b>DESIGNATION</b>	<b>POSTING PLACE</b>
1	Pritish Chandra Paul	Agriculture Extension Officer	Upazila Agriculture Office, Chowhali, Shirajgonj
2	Sharmina Shamim	Agriculture Extension Officer	Upazila Agriculture Office, Fakirhat, Bagerhat
3	Mosaddiqr Rahman	Scientific Officer	BARI, Debigonj, Panchagarh
4	Md. Rofekuggaman	Agriculture Extension Officer	Upazila Agriculture Office, Sadar, Dinajpur,
5	Mahbuba Jamil	Agriculture Extension Officer	Upazila Agriculture Office, Satoria, Manikgonj
6	Mst. Rita Pervin	Instructor	Agriculture Training Institute, Shimultoli, Gazipur

<del>7</del>	<del>Ayesha Akter</del>	<del>Instructor</del>	<del>Agriculture Training Institute</del>
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			Shimultoli, Gazipur
8	Amina Khatun	Instructor	Agriculture Training Institute, Shimultoli, Gazipur
9	Iffat Kibria Al Nayeem	Agriculture Extension Officer	Upazila Agriculture Office, Baliadangi, Thakurgaon
10	Monirul Haque Romel	Agriculture Extension Officer	Upazila Agriculture Office, Palash, Narshingdi
11	Muhammad Waliur Rahman	Scientific Officer	BSPC,BARI, Debigonj, Panchagarh
12	Fakhar Uddin Talukder	Scientific Officer	BJRI, Dhaka
13	Dr. Md. Abul Kalam Al Azad	Principal Scientific Officer	BSRI, Ishurdi
14	Muhammad Quaikobad Khan	Senior Instructor	Agriculture Training Institute, Sherpur
15	Mohammad Nasir Uddin	Senior Assistant Director (Farm)	BADC, Gabtoli, Dhaka
16	A K M Moshir Rahman	Assistant Engineer	BMDA, Rangpur Zone
17	H.M. Syfullah Azad	Senior Scientific Officer	Cotton Research Farm, Sadarpur, Dinajpur
18	Md. Naimul Hassan	Scientific Officer	SRDI, District Office, Pabna
19	Taslina Yeasmin	Seed Analyst	SCA, Gazipur
20	Dr. Mst. Tuhina Khatun	Senior Scientific	BRRI, Gazipur
21	Lipiara Khatun	Scientific Officer	BRRI, Gazipur
22	Tanzila Rahman	Agriculture Extension Officer	Upazila Agriculture Office, Sadar, Gazipur
23	Jannatul Farhouse	Scientific Officer	BINA, Mymensingh
24	K.M. Eadun Nabi	Scientific Officer	BINA, Mymensingh
25	Hafsha Khatun	Senior Assistant Director	NATA, Gazipur

### LIST OF ALL RESOURCE PERSONNEL

SL. No.	NAME OF THE RESOURCE PERSONNEL	DESIGNATION	POSTING PLACE
1	Dr. Md. Ashik Iqbal Khan	Senior Scientific Officer	BRRI, Gazipur
2	Md. Jamal Uddin	Deputy Director (Entomology)	NATA, Gazipur Cell: 01718214607
3	Dr. Ashraf Uddin Ahammed	PSO, Plant Pathology Division	BARI, Gazipur. Cell: 01711117724

4	Dr. Md. Abdul Mazed	Deputy Director (LR)	NATA, 11 Gazipur.
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			Cell: 01814849190
5	Dr. Selina Akhter	PSO & Head	BSRI, Gazipur. Cell: 01716089694
6	Dr.Md. Ruhul Amin,	Professor Dept. of Entomology,	BSMRAU, Gazipur. Cell: 01711548416
7	Dr. Debasish Sarker	PSO, Division of Entomology	BARI, Gazipur. Cell: 01712274933
8	Dr. Selina Parvin	CSO & Head (Pathology)	BARI,Gazipur. Cell : 01916841302
9	Dr. Md. Siddiqur Rahman	Senior Scientific Officer	BARI, Gazipur. Cell : 01711277230
10	Md. Shahadat Hossain Siddique	Senior Assistant Director	NATA Gazipur. Cell: 01753896598
11	Dr. Md. Sultan Ahmed	PSO, Division of Entomology	BARI, Gazipur, Cell : 01711242901
12	Dr. M.A. Latif	CSO & Head (PlantPathology Division)	BRRI.Gazipur. Cell: 01715034094
13	Dr. Md. Sayedur Rahman	Deputy Director (Admin.)	NATA, Gazipur. Cell: 01552495564
14	Jharna Begum	Senior Assistant Director	NATA, Gazipur. Cell: 01838091834

### LIST OF ALL RESOURCE PERSONNEL



**INAUGURATED  
THE TRAINING  
BY DG, NATA  
SPEECH**

**WELCOME SPEECH  
BY THE COURSE CO-  
ORDINATOR**







**ONGOING  
TRAINING  
SESSION**

**CERTIFICATE  
DISTRIBUTION**



## COURSE EVALUATION

- ▶ The course contents are sufficient.
- ▶ Duration of the course is satisfactory.
- ▶ Management of the training course is satisfactory.
- ▶ Selection of the resource speaker is good.
- ▶ Management team was very cordial and helpful.

### 👉 TOPICS THEY LIKED MOST...

- An overview of Eco-friendly Plant Protection Technology in Bangladesh.
- NATA pest museum visit.
- Attractive slide & video of different pest and their eco-friendly management techniques.
- Pesticide regulations rules & it's safe uses.
- Climate change and its effects on insect pest populations.
- Apps making tips.

### 👉 TOPICS THEY DISLIKED ...

- Budget Insufficiency.
- Very tight schedule.
- Load shedding.
- Interruption of mobile network at NATA campus area.

### 👉 SUGGESTION NEED TO BE ADDED...

- Token gift for 1<sup>st</sup> position holder.
- Prayer room for lady officer's.
- Eco-friendly agricultural plot visit.
- Provide more time for discussion & exercise.
- Refresher's course should be arranged.



COURSE  
EVALUATING  
SPEECH BY  
THE TRAINEE



## GRAPHICAL VIEW OF TRAINEE'S PRE & POST EVALUATION

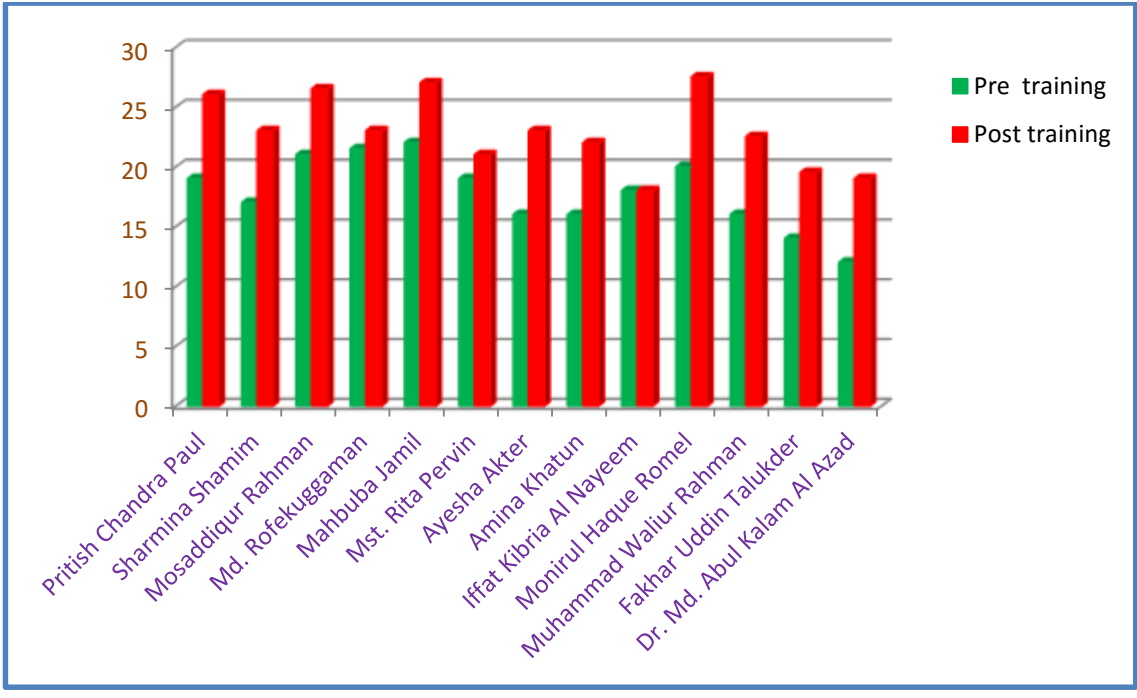


Figure 1: Trainee's (1-13) pre & post evaluation by the course management.

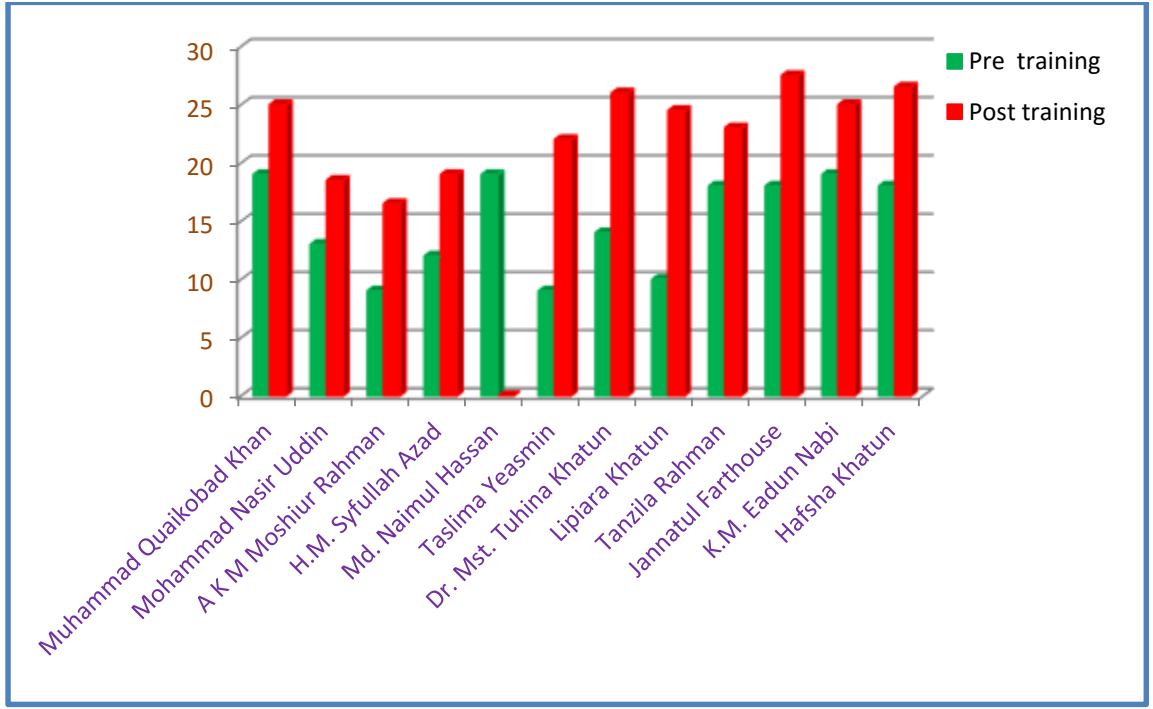


Figure 2: Trainee's (14-25) pre & post evaluation by the course management.





## GRAPHICAL VIEW OF RESOURCE PERSON EVALUATION

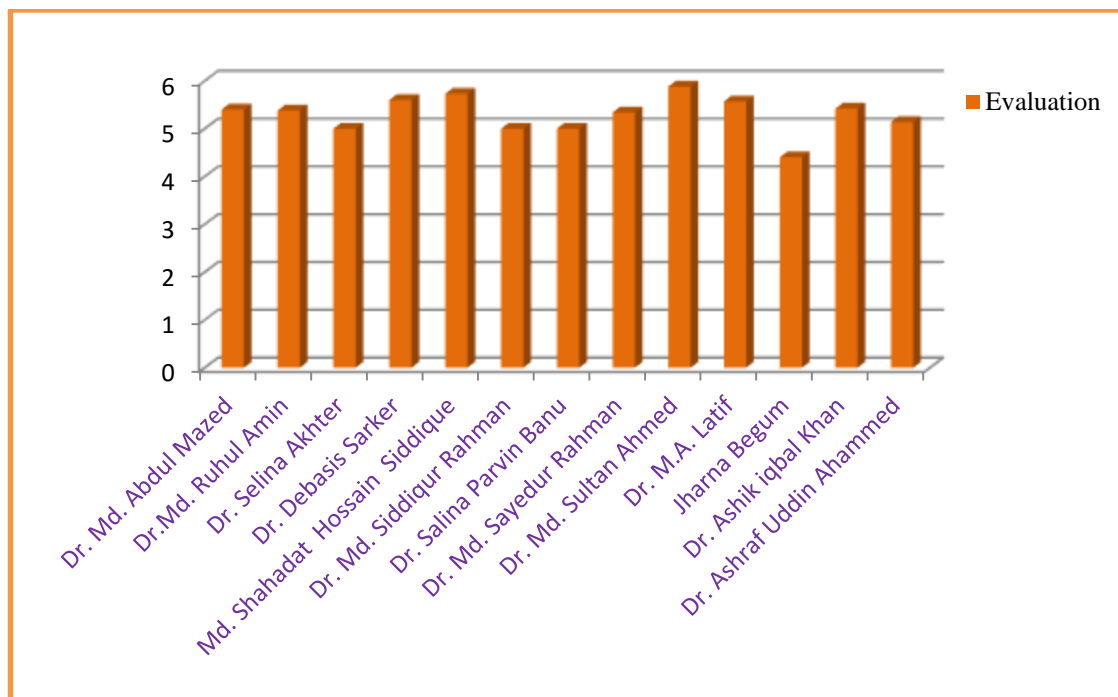


Figure 3: Resource person evaluation by the trainee's.

## CONCLUSION

Eco-friendly agriculture is a government mended and also performs best in climate change condition. Some topics have to include for new eco invention techniques on agriculture & make module always time based. The training was fruitful which can play a good impact on eco-friendly agriculture.

