

**Training Course
on
Food Processing and Preservation Techniques**

29 September -03 October 2019

Course Completion Report



**National Agriculture Training Academy (NATA)
Ministry of Agriculture
www.nata.gov.bd**

Training Course
on
Food Processing and Preservation Techniques

29 September -03 October 2019

Course Management

- Course Advisor : **Dr. Md. Abu Sayeed Miah**
Director General
NATA, Gazipur
- Course Director : **Dr. Md. Abu Sayeed Miah**
Director (Training)
NATA, Gazipur
- Course Coordinator : **Dr. Md. Mayen Uddin**
Deputy Director (Food Technology)
NATA, Gazipur
- Asst. Course Coordinator : 1. **MD. Eskander Hossain**
Senior Assistant Director
NATA, Gazipur
2. **Nilufa Akter**
Senior Assistant Director
NATA, Gazipur
-

Contents

| Sl. No. | Subject | Page |
|----------------|--|-------------|
| 1 | Introduction | 1 |
| 2 | Course Objectives | 1 |
| 3 | Duration of the Course | 1 |
| 4 | Course Content | 1-2 |
| 5 | Participants of the Course..... (annexure I) | 3-4 |
| 6 | Recourse Person & Guest Speaker(annexure II) | 5 |
| 7 | Training Schedule(annexure III) | 6-7 |
| 8 | Course Evaluation by the Participants(annexure IV) | 8 |
| 9 | Speaker Evaluation by the Participants....(annexure V) | 9-12 |
| 10 | Participants Evaluation | 13-14 |
| 11 | Pre & Post evaluation question | 15 |

Course at a glance

1. Introduction

Food processing and preservation is a set of physical, chemical and biological processes that are performed to prolong the shelf life of foods and at the same time retain the features that determine their quality, like colour, texture, flavor and especially nutritional value. Food preservation is achieved by destroying enzymes and microorganisms using heat (blanching, pasteurization), or preventing their action by: removal of water, or increasing acidity or using low temperatures.

2. Course objectives :

1. To improve participant's skills in designing and implementing food processing operations in their own jurisdiction.
2. To develop advanced knowledge and idea of participants to investigate various parameters involved in food processing and preservation with respect to their influence on final product quality and safety
3. To develop knowledge of personnel working in agriculture about processing steps involved in a range of contemporary and novel manufacturing operations

Target population : Officers of different organizations under Ministry of Agriculture.

Duration of each session: 60 minutes.

3. Course Content

| SL.No. | Topics |
|--------|--|
| 1 | National Food Policy, Rules & Regulation |
| 2 | Food Processing & Preservation: Implications for assuring food security |
| 3 | Concept on Safe and Nutritious Foods |
| 4 | Principles and methods of Food Preservation |
| 5 | Good Manufacturing Practices |
| 6 | Packaging of fresh and processed foods |
| 7 | Food Processing and Preservation by Heat Treatments |
| 8 | Principles and Methods of Osmotic Dehydration |
| 9 | Overview on Minimal Processing of Fruits and Vegetables |
| 10 | Good Agriculture Practice (GAP) and Standard Operating Procedure (SOP) for preservation & Processing of Food |
| 11 | Food Preservation by increasing solids |
| 12 | Causes of Food Spoilage and Remedies |

| | |
|----|---|
| 13 | Preparation of Jam/Jelly/Marmalade |
| 14 | Food Processing by Frying |
| 15 | Preparation of fried products (Practical) |
| 16 | Overview on Washing and Cooling of fresh produces |
| 17 | Overview on Minimal Processing of Fruits and Vegetables (Practical) |
| 18 | Fermentation as the methods of food processing and preservation |
| 19 | Food Adulteration and Safety |
| 20 | Use of food additives and preservatives |
| 21 | Food Processing by Drying |
| 22 | <i>Food Poisoning and its remedies</i> |
| 23 | Pickling (Practical) |

Participants of course..... (annexure-01)

“Food Processing and Preservation Techniques”

| SL. | Name | Designation, Posting place & Organization | Mobile | email |
|-----|---------------------------|---|--------------|---------------------------|
| 1. | Md. Harunor Rashid | Scientific Officer, TCRC, BARI, Gazipur | 01719-617778 | james@bari.gov.bd |
| 2. | Ummy Kulsum | Scientific Officer,ORC, BARI, Gazipur | 01688-545743 | tarin25772@gmail.com |
| 3. | Most. Sadia Arfin | Scientific Officer , HRC, BARI, Gazipur | 01720085107 | arfinsadia@gmail.com |
| 4. | Mahedi Hasan | Scientific Officer BARI, Gazipur | 01716-584547 | mhasanbau@gmail.com |
| 5. | Roknuzzaman | Scientific Officer, BARI, Ishurdi, Pabna. | 01712-825208 | rokonae99@gmail.com |
| 6. | Dr. Md. A. Majid | Senior Scientific Officer BIRTAN, Sirajganj | 01722-403220 | ssosirajganj@gmail.com |
| 7. | Dr. Most. Altaf-Un-Nahar | Senior Scientific officer, BIRTAN, Netrakona | 01782-700811 | altaf.nahar@yahoo.com |
| 8. | Md. Nur Alam Siddiqui | Senior Scientific Officer BIRTAN, Jhenaidah. | 01731-014078 | siddiqui.rp@gmail.com |
| 9. | Md. Marufur Rahman | Scientific Officer, BIRTAN, Rangpur | 01783-280876 | marufur@birtan.gov.bd |
| 10. | S.M. Mahbub Alam | Assistant Director, DAM, Khulna. | 01715-350411 | mahbubscdp@yahoo.com |
| 11. | Md. Shofikul Islam | Senior Assistant Director, BADC, Dhaka | 01713-791443 | sabujdinaj@yahoo.com |
| 12. | Mohammad Nazrul Islam | Additional Deputy Director (Crop), DAE, Barishal | 01721-097952 | kbnazrulislam@yahoo.com |
| 13. | Md. Masudur Rahman Sarker | Additional Deputy Director (Hort.) DAE, Kurigram. | 01712-070148 | masuduao73@gmail.com |
| 14. | Ashik Jamil Mahmud | Upazila Agriculture Officer, DAE, Faridgonj, Chandpur | 01670-058618 | uaoharipur@dae.gov.bd |
| 15. | Liton Debnath | Upazila Agriculture Officer, DAE, Fatikchhari, Chattogram | 01716-234641 | litanati@yahoo.com |
| 16. | Md. Maruf Hossain | Agriculture Extension Officer, DAE, Haripur,Thakurgaon | 01744-635594 | marufbau@gmail.com |
| 17. | Nasrin Sultana | Agriculture Extension Officer, DAE, Austagram, Kishoregonj | | |
| 18. | Khan Mohammad Salehin | Agriculture Extension Officer, Thana circle Agricultural Office,Tejgoan, DAE, Dhaka | 01551-816220 | miton2989@gmail.com |
| 19. | Amit Bagchi | Agriculture Extension Officer, DAE, Moheshpur, Jhenaidah | 01722-637964 | amitabagchi3783@gmail.com |
| 20. | Md. Belal Hosain | Agriculture Extension Officer, | 01731-291438 | belaltara.bd@gmail. |

| SL. | Name | Designation, Posting place & Organization | Mobile | email |
|-----|-----------------------------|--|--------------|-----------------------------|
| | | DAE, Atrai, Naogaon | | com |
| 21. | Md. Najmul Hasan | Agriculture Extension Officer, DAE,Zakigonj, Sylhet | 01725-234270 | najmulbau148@gmail.com |
| 22. | Krishna Sarkar | Agriculture Extension Officer, DAE, Dacope, Khulna | 01983-026959 | krishnasarkar1933@gmail.com |
| 23. | Md. Abu Hanif | Agriculture Extension Officer, DAE, Naniarchar, Rangamati | 01743-719066 | hanifsau@yahoo.com |
| 24. | Ratan Kumar Ghosh | Agriculture Extension Officer, DAE, Bhedarganj,Shariatpur. | 01718-884669 | |
| 25. | Israt Jahan, | Additional Agriculture officer, DAE,NatrakonaSadar, Netrakona | ০১৬৮২-৬৮৮৭০৭ | isratmym@gmail.com |
| 26. | Mst. Jaki Tania | Additional Agriculture officer, DAE, Atghoria, Pabna | 01717-898489 | tania.jaki@gmail.com |
| 27. | Md. Nazmul Hasan Mehedi | Scientific Officer, BINA, Mymensingh | 01739-898728 | nazmul02348@gmail.com |
| 28. | Nasrin Akhther | Senior Scientific Officer, BINA,Mymensingh | 01745-186026 | nasrnat080836@gmail.com |
| 29. | Dr.Md. Noor-E-Alam Siddiqui | Chief Instructor, ATI, Araihasar, Narayangonj | 01716-900430 | dr.nealam@yahoo.com |
| 30. | Sumaya Sharmin | Publication officer, NATA,Gazipur | 01738-135204 | sumayabau@gmail.com |

List of Resource Speaker
(Annexure- II)

| SL No. | Name | Designation | Organization | e-mail and mobile No. |
|---------------|-----------------------------------|----------------------------|--|---|
| 1 | Dr. M. Burhan Uddin | Professor | Dept. of Food tech. & Rural Ind, BAU | 01711-110509 burhan992003@yahoo.com |
| 2 | Dr. Mohammad Gulzarul Aziz | Professor | Dept. of Food tech. & Rural Ind, BAU | 01631-748866 aziz_ftri@bau.edu.bd |
| 3 | Dr. MD. Miaruddin | CSO | Post-harvest Technology Division | 01713-273806/ 01199-825632 |
| 4 | Dr. Md. Ayub Hossain | CSO | Farm Machinery Division, BARI | 01716-979034 |
| 5 | Dr. Amdadul Hoque | Associate Professor | Dept. Agroprocessing, BSMAU, Gazipur | 01934-499867 amdad115@gmail.com mhaque@bsmrau.edu.bd |
| 6 | Dr Md. Monirul Islam | Director (Nutrition) | BARC, Dhaka | 01777-686866 |
| 7 | Dr. Golam Ferdous Ahmed Chowdhury | SSO | Post-harvest Division, BARI | 01712-271163 |
| 8 | Dr. Mohammad Mainuddin Molla | SSO | PHTD, BARI | mainuddinmolla@yahoo.com 01712-231121 |
| 9 | Maruf Ahmed | Head of Q/C | PRAN RFL | pblqc@pip.prangroup.com 01912-257201 |
| 10 | Dr. Shahjahan | Former CSO | BARI | shah_phd@yahoo.com 01716-174288 |
| 11 | Dr. Taslima Ayesha Akter Nasrin | SSO | Horticulture Division, BARI | 01751-904470 |
| 12 | Md. Hafizul Haque Khan | PSO | Post-harvest Technology Division, BARI | |
| 13 | MD. Mahmud Hasan | DD (Horticulture) | NATA | mahamudhassandae@gmail.com 01817-066613 |
| 14 | Dr. MD. Moin Uddin | DD (Food Technology) | NATA | Mayen.dae85@yahoo.com 01711969688 |
| 15 | MD. Eskandar Hossain | Senior Assistant Director, | NATA | eskandarhossain@yahoo.com 01938-615225 |
| 16 | Nilufa Akter | Senior Assistant Director, | NATA | nilufaa@yahoo.com 01719-174775 |

(Annexure- III)

Training schedule on Food Processing and Preservation Techniques

Duration: 29 Sept to 03 Oct 2019

1st Day : 29/09/2019

| Time | Topics | Methods | Speaker |
|-------------|---|----------------|--|
| 08:30-09.00 | Registration | - | Lucky |
| 09.00-09.30 | Pre evaluation | | CC/ ACC |
| 09:30-10:15 | Inaugural session | - | DG/Directors/Faculties |
| 10:15-11:15 | National Food Policy, Rules & Regulation | L&D | Prof. Dr. M. Burhan Uddin, Dept. of Food tech. & Rural Ind, BAU, Mymensingh |
| 11:15-11:45 | Tea Break | | |
| 11:45-12:45 | Food Processing & Preservation: Implications for assuring food security | L & D | Do |
| 12:45-02:00 | Prayer and lunch break | | |
| 02:00-03:00 | Concept on Safe and Nutritious Foods | L & D | Prof. Dr. Mohammad Gulzarul Aziz, Dept. of Food tech. & Rural Ind, BAU, Mymensingh |
| 03:00-04:00 | Do | L & D | Do |
| 04:00-04:15 | Tea Break | | |
| 04:15-05:15 | Principles and methods of Food Preservation | L & D | Do |

2nd Day : 30/09/2019

| Time | Topics | Method | Resource person |
|---------------|--|---------------|--|
| 09:00 - 10:00 | Good Agriculture Practice (GAP) and Standard Operating Procedure (SOP) for preservation & Processing of Food | L & D | MD. Mahmud Hasan DD (Horticulture), NATA |
| 10:00-11:00 | Packaging and Transportation of fresh fruits and vegetables | L & D | MD. Eskandar Hossain Senior Assistant Director, NATA |
| 11:00-11:15 | Tea Break | | |
| 11: 15-12:15 | Traditional Food Processing and Preservation Techniques | L & D | MD. Amdadul Hoque, Professor Dept. Agroprocessing, BSMAU, Gazipur |
| 12:15-01:15 | Food Processing and Preservation by Heat Treatment | L & D | MD. Amdadul Hoque, Associate Professor Dept. Agroprocessing, BSMAU, |

| | | | |
|-------------|---|-------|---|
| | | | Gazipur |
| 01:15-02:30 | Prayer and lunch break | | |
| 02:30-03:30 | Principles and Methods of osmotic dehydration | L & D | Dr. Mohammad Mainuddin Molla SSO, PHTD, BARI |
| 03:30-04:30 | Overview on Minimal Processing of Fruits and Vegetables | L & D | Dr. Taslima Ayesha Akter Nasrin SSO, Horticulture Division, BARI |
| 04:30-05:00 | Tea Break | | |

3rd Day : 01/10/2019

| Time | Topics | Method | Resource person |
|---------------|---|-----------|--|
| 09:00 - 10:00 | Food Preservation by increasing solids | L&D | Dr. Golam Ferdous Ahmed Chowdhury, SSO, Post-harvest Division, BARI |
| 10:00 –11:00 | Preparation of Jam/Jelly/Marmalade | Practical | Dr. Mohammad Mainuddin Molla SSO, PHTD, BARI |
| 11:00-11:15 | Tea Break | | |
| 11:15-12:15 | Food Processing by Frying | L&D | Dr. Golam Ferdous Ahmed Chowdhury, SSO, Post-harvest Division, BARI |
| 12:15-01:15 | Preparation of fried products | Practical | Do |
| 01:15 - 02:30 | Prayer and lunch break | | |
| 02:30-03:30 | Overview on Washing and Cooling of fresh produces | L & D | Dr. Golam Ferdous Ahmed Chowdhury, SSO, Post-harvest Division, BARI |
| 03:30-04:30 | Overview on Minimal Processing of Fruits and Vegetables | Practical | Dr. Taslima Ayesha Akter Nasrin SSO, Horticulture Division, BARI |
| 04:30-05:00 | Tea Break | | |

4th Day : 02/10/2019

| Time | Topics | Method | Resource person |
|---------------|--|--------|---|
| 09:00 - 10:00 | Food Adulteration and Safety | L & D | Dr Md. Monirul Islam Director (Nutrition), BARC, Dhaka |
| 10:00 –11.00 | Use of food additives and preservatives | L & D | Do |
| 11:00-11:15 | Tea Break | | |
| 11:15-12:15 | Food Processing by Drying | L & D | Dr. Md. Ayub Hossain CSO, Farm Machinery Division, BARI |
| 12:15 - 01:15 | Food Processing by drying | L & D | Do |
| 01:15-02:30 | Prayer and lunch break | | |
| 02:30-08:30 | Field Visit (BARI, Aarong Dairy, BRAC, Bangobondhu safari Park) | | |

5th Day: 03/10/2019

| Time | Topics | Method | Resource person |
|---------------|---|---------------|--|
| 09:00 - 10:00 | Good Manufacturing Practices | L & D | Maruf Ahmed, Head of Q/C, PRAN RFL |
| 10:00 –11.00 | Good Manufacturing Practices | L & D | Do |
| 11:00-11:15 | Tea break | | |
| 11:15-12:15 | Causes of Food Spoilage and Remedies | L & D | Nilufa Akter Senior Assistant Director, NATA |
| 12:15-01:15 | Fermentation as the methods of food processing and preservation | L & D | Dr. Md. Shahjahan Professor , Zarman University, Gazipur |
| 01:15 - 02:30 | Lunch and prayer | | |
| 02:30-03:30 | Pickling (Practical) | | Dr. Md. Shahjahan Professor, Zarman University, Gazipur |
| 03:30-04:30 | Do | | Do |
| 04:30-05:30 | Closing session | Practical | DG/CC/ACC |

Training Coordinator
Dr. Md. Mayen Uddin
Deputy Director (Food Technology)
NATA, Gazipur

Course Evaluation by the Participants(annexure IV)

Best Training Methods choose by the participants

1. Practical class
2. Group discussion
3. Video clip

The issues that are disliked by the participants

1. More theory class
2. Many information in a topic
3. One speaker in more than two class
4. Load shedding
5. Shortage of field trip food manufacturing company

The others associated issues they liked

1. Topic wise expert resource persons were selected very prudently.
2. Management of dining by mess committee
3. Time management
4. Discipline & management
5. Expert resource persons
6. Wi-fi facilities
7. Cooperation of NATA Authority
8. Cooperation of Course Coordinator and Asst. Course Coordinator very remarkable.

Conclusion and recommendation by the Course Management Team:

1. Uninterrupted internet and electricity supply should be provided
 2. Training duration should be increased.
 3. Arrangement of food manufacturing company visit
 4. Provide more time for practical class
 5. Hard copy of manual of training course
 6. Refresher's course should be arranged
 7. Selection resource speaker on the basis of speaker evaluation score by the participants
 8. Important class should be conducted in the morning
 9. Sports facilities should be available.
 10. Single room for single officer
 11. Recreation facilities (TV) in each dormitory
 12. Incorporate quality food export related class in training schedule
 13. Incorporate Govt. policy & BSTI standard class in training schedule
 14. Incorporate postharvest disease & insects pests management class in training schedule
-

(Annexure - V)

Speaker Evaluation by Trainees

Grade range: 1-6 (Higher marks represent the higher grade)

| Speaker name and address | Subject | Criteria | Obtained grade (Average) | Comments |
|--|---|---|--------------------------|--------------|
| Prof. Dr. M. Burhan Uddin, Dept. of Food tech. & Rural Ind, BAU | National Food Policy, Rules & Regulation | Knowledge Over subject | 5.2 | |
| | | Ability to present ideas clearly/relevantly | | |
| | | Ability to make the class/session participatory | | |
| | | Ability to Handle Q/A | | |
| | | Control over class | | |
| | | Time management | | |
| | Food Processing & Preservation: Implications for assuring food security | Knowledge Over subject | 5.1 | |
| | | Ability to present ideas clearly/relevantly | | |
| | | Ability to make the class/session participatory | | |
| | | Ability to Handle Q/A | | |
| | | Control over class | | |
| | | Time management | | |
| Prof. Dr. Mohammad Gulzarul Aziz, Dept. of Food tech. & Rural Ind, BAU | Concept on Safe and Nutritious Foods | Knowledge Over subject | 5.4 | Good Speaker |
| | | Ability to present ideas clearly/relevantly | | |
| | | Ability to make the class/session participatory | | |
| | | Ability to Handle Q/A | | |
| | | Control over class | | |
| | | Time management | | |
| | Principles and methods of Food Preservation | Knowledge Over subject | 5.3 | |
| | | Ability to present ideas clearly/relevantly | | |
| | | Ability to make the class/session participatory | | |
| | | Ability to Handle Q/A | | |
| | | Control over class | | |
| | | Time management | | |
| Dr. Mohammad Mainuddin Molla SSO, PHTD, BARI | Principles and Methods of osmotic dehydration | Knowledge Over subject | 4.4 | |
| | | Ability to present ideas clearly/relevantly | | |
| | | Ability to make the class/session participatory | | |
| | | Ability to Handle Q/A | | |

| Speaker name and address | Subject | Criteria | Obtained grade (Average) | Comments |
|---|--|---|--------------------------|----------|
| | | Control over class | | |
| | | Time management | | |
| MD. Mahmud Hasan DD (Horticulture), NATA | Good Agriculture Practice (GAP) and Standard Operating Procedure (SOP) for preservation & Processing of Food | Knowledge Over subject | 4.8 | |
| | | Ability to present ideas clearly/relevantly | | |
| | | Ability to make the class/session participatory | | |
| | | Ability to Handle Q/A | | |
| | | Control over class | | |
| | | Time management | | |
| MD. Eskandar Hossain Senior Assistant Director, NATA | Packaging and Transportation of fresh fruits and vegetables | Knowledge Over subject | 4.9 | |
| | | Ability to present ideas clearly/relevantly | | |
| | | Ability to make the class/session participatory | | |
| | | Ability to Handle Q/A | | |
| | | Control over class | | |
| | | Time management | | |
| Dr. MD. Amdadul Hoque, Associate Professor Dept. Agroprocessing, BSMAU, Gazipur | Traditional Food Processing and Preservation Techniques | Knowledge Over subject | 4.9 | |
| | | Ability to present ideas clearly/relevantly | | |
| | | Ability to make the class/session participatory | | |
| | | Ability to Handle Q/A | | |
| | | Control over class | | |
| | | Time management | | |
| | Food Processing and Preservation by Heat Treatment | Knowledge Over subject | 4.9 | |
| | | Ability to present ideas clearly/relevantly | | |
| | | Ability to make the class/session participatory | | |
| | | Ability to Handle Q/A | | |
| | | Control over class | | |
| | | Time management | | |
| Dr. Taslima Ayesha Akter Nasrin SSO, Horticulture Division, BARI | Overview on Minimal Processing of Fruits and Vegetables | Knowledge Over subject | 4.7 | |
| | | Ability to present ideas clearly/relevantly | | |
| | | Ability to make the class/session participatory | | |
| | | Ability to Handle Q/A | | |
| | | Control over class | | |
| | | Time management | | |
| Dr. Golam Ferdous Ahmed Chowdhury, | Food Preservation by increasing solids | Knowledge Over subject | | |
| | | Ability to present ideas clearly/relevantly | | |
| | | Ability to make the | | |

| Speaker name and address | Subject | Criteria | Obtained grade (Average) | Comments |
|--|---|---|---------------------------------|-----------------|
| SSO, Post-harvest Division, BARI | | class/session participatory | 5.0 | |
| | | Ability to Handle Q/A | | |
| | | Control over class | | |
| | | Time management | | |
| Dr. Mohammad Mainuddin Molla SSO, PHTD, BARI | Preparation of Jam/Jelly/Marmalade | Knowledge Over subject | 5.2 | |
| | | Ability to present ideas clearly/relevantly | | |
| | | Ability to make the class/session participatory | | |
| | | Ability to Handle Q/A | | |
| | | Control over class | | |
| | | Time management | | |
| Dr. Golam Ferdous Ahmed Chowdhury, SSO, Post-harvest Division, BARI | Food Processing by Frying | Knowledge Over subject | 4.8 | |
| | | Ability to present ideas clearly/relevantly | | |
| | | Ability to make the class/session participatory | | |
| | | Ability to Handle Q/A | | |
| | | Control over class | | |
| | | Time management | | |
| Dr. Md. Shahjahan professor, German University, Gazipur | Fermentation as the methods of food processing and preservation | Knowledge Over subject | 5.5 | |
| | | Ability to present ideas clearly/relevantly | | |
| | | Ability to make the class/session participatory | | |
| | | Ability to Handle Q/A | | |
| | | Control over class | | |
| | | Time management | | |
| | Pickling | Knowledge Over subject | 5.4 | |
| | | Ability to present ideas clearly/relevantly | | |
| | | Ability to make the class/session participatory | | |
| | | Ability to Handle Q/A | | |
| | | Control over class | | |
| | | Time management | | |
| Dr. Taslima Ayesha Akter Nasrin SSO, Horticulture Division, BARI | Overview on Minimal Processing of Fruits and Vegetables | Knowledge Over subject | 4.8 | |
| | | Ability to present ideas clearly/relevantly | | |
| | | Ability to make the class/session participatory | | |
| | | Ability to Handle Q/A | | |
| | | Control over class | | |
| | | Time management | | |
| Dr. Md. Ayub Hossain | Food Processing by Drying | Knowledge Over subject | 5.0 | |
| | | Ability to present ideas | | |

| Speaker name and address | Subject | Criteria | Obtained grade (Average) | Comments |
|--|---|---|---------------------------------|-----------------|
| CSO, Farm Machinery Division, BARI | | clearly/relevantly | | |
| | | Ability to make the class/session participatory | | |
| | | Ability to Handle Q/A | | |
| | | Control over class | | |
| | | Time management | | |
| Dr. Golam Ferdous Ahmed Chowdhury, SSO, Post-harvest Division, BARI | Overview on Washing and Cooling of fresh produces | Knowledge Over subject | 5.1 | |
| | | Ability to present ideas clearly/relevantly | | |
| | | Ability to make the class/session participatory | | |
| | | Ability to Handle Q/A | | |
| | | Control over class | | |
| | | Time management | | |
| MD. Maruf Kabir, Head of Q/C, PRAN RFL | Good Manufacturing Practices | Knowledge Over subject | 4.4 | |
| | | Ability to present ideas clearly/relevantly | | |
| | | Ability to make the class/session participatory | | |
| | | Ability to Handle Q/A | | |
| | | Control over class | | |
| | | Time management | | |
| Nilufa Akter Senior Assistant Director, NATA | Causes of Food Spoilage and its remedies | Knowledge Over subject | 4.8 | |
| | | Ability to present ideas clearly/relevantly | | |
| | | Ability to make the class/session participatory | | |
| | | Ability to Handle Q/A | | |
| | | Control over class | | |
| | | Time management | | |
| Dr Md. Monirul Islam Director (Nutrition) BARC, Dhaka | Food Adulteration and Safety | Knowledge Over subject | 5.9 | Best Speaker |
| | | Ability to present ideas clearly/relevantly | | |
| | | Ability to make the class/session participatory | | |
| | | Ability to Handle Q/A | | |
| | | Control over class | | |
| | | Time management | | |
| | Use of food additives and preservatives | Knowledge Over subject | 5.9 | Best Speaker |
| | | Ability to present ideas clearly/relevantly | | |
| | | Ability to make the class/session participatory | | |
| | | Ability to Handle Q/A | | |
| | | Control over class | | |
| | | Time management | | |

Participants Evaluation..... (annexure-vi)

“Food Processing and Preservation Techniques”

Full Marks: 50

| SL. | Name | Designation, Posting place & Organization | Pre-evaluation | Post evaluation |
|-----|---------------------------|--|----------------|-----------------|
| 1. | Md. Harunor Rashid | Scientific Officer, TCRC, BARI, Gazipur | 5 | 26 |
| 2. | Ummy Kulsum | Scientific Officer, ORC, BARI, Gazipur | 8 | 34 |
| 3. | Most. Sadia Arfin | Scientific Officer , HRC, BARI, Gazipur | 13 | 28 |
| 4. | Mahedi Hasan | Scientific Officer BARI, Gazipur | 16 | 31 |
| 5. | Roknuzzaman | Scientific Officer, BARI, Ishurdi, Pabna. | 9 | 37 |
| 6. | Dr. Md. A. Majid | Senior Scientific Officer BIRTAN, Sirajganj | 16 | 25 |
| 7. | Dr. Most. Altaf-Un-Nahar | Senior Scientific officer, BIRTAN, Netrakona | 11 | 18 |
| 8. | Md. Nur Alam Siddiqui | Senior Scientific Officer BIRTAN, Jhenaidah. | 16 | 22 |
| 9. | Md. Marufur Rahman | Scientific Officer, BIRTAN, Rangpur | 13 | 29 |
| 10. | S.M. Mahbub Alam | Assistant Director, DAM, Khulna. | 00 | 23 |
| 11. | Md. Shofikul Islam | Senior Assistant Director, BADDC, Dhaka | 30 | 40 |
| 12. | Mohammad Nazrul Islam | Additional Deputy Director (Crop), DAE, Barishal | 18 | 30 |
| 13. | Md. Masudur Rahman Sarker | Additional Deputy Director (Hort.) DAE, Kurigram. | 18 | 30 |
| 14. | Ashik Jamil Mahmud | Upazila Agriculture Officer, DAE, Faridgonj, Chandpur | 11 | 29 |
| 15. | Liton Debnath | Upazila Agriculture Officer, DAE, Fatikchhari, Chattogram | 11 | 26 |
| 16. | Md. Maruf Hossain | Agriculture Extension Officer, DAE, Haripur, Thakurgaon | 26 | 32 |
| 17. | Nasrin Sultana | Agriculture Extension Officer, DAE, Austagram, Kishoregonj | 13 | 26 |
| 18. | Khan Mohammad Salehin | Agriculture Extension Officer, Thana circle Agricultural Office, Tejgoan, DAE, Dhaka | 13 | 27 |
| 19. | Amit Bagchi | Agriculture Extension Officer, | 16 | 28 |

| SL. | Name | Designation, Posting place & Organization | Pre-evaluation | Post evaluation |
|-----|---------------------------------|--|----------------|-----------------|
| | | DAE, Moheshpur, Jhenaidah | | |
| 20. | Md. Belal Hosain | Agriculture Extension Officer, DAE, Atrai, Naogaon | 22 | 40 |
| 21. | Md. Najmul Hasan | Agriculture Extension Officer, DAE,Zakigonj, Sylhet | 20 | 29 |
| 22. | Krishna Sarkar | Agriculture Extension Officer, DAE, Dacope, Khulna | 17 | 32 |
| 23. | Md. Abu Hanif | Agriculture Extension Officer, DAE, Naniarchar, Rangamati | 12 | 27 |
| 24. | Ratan Kumar Ghosh | Agriculture Extension Officer, DAE, Bhedarganj,Shariatpur. | 7 | 26 |
| 25. | Israt Jahan | Additional Agriculture officer, DAE,NatrakonaSadar, Netrakona | 14 | 29 |
| 26. | Mst. Jaki Tania | Additional Agriculture officer, DAE, Atghoria, Pabna | 15 | 31 |
| 27. | Md. Nazmul Hasan Mehedi | Scientific Officer, BINA, Mymensingh | 14 | 31 |
| 28. | Nasrin Akhther | Senior Scientific Officer, BINA,Mymensingh | 20 | 32 |
| 29. | Dr.Md. Noor-E- Alam Siddiqui | Chief Instructor, ATI, Araihasar, Narayangonj | 20 | 35 |
| 30. | Sumaya Sharmin | Publication officer, NATA,Gazipur | 20 | 34 |

Training on Food Processing and Preservation Techniques
Post Evaluation

Value of each questions are equal

Full Marks- 50

Times: 30 minutes

Name:

1. Define food and food processing.
 2. What is food preservation ?
 3. State objectives food processing .Write common methods of food processing ?
 - 4.Writedown the causes of food spoilage .
 - 5.What are the factors which affects food technology ?
 - 6.Explain opportunities and challengesof food processing in Bangladesh?
 7. Writedown the function of food.
 8. Method of food processing
 9. Define pasteurization.
 10. Define jam, jelly and marmalade.
-