

Report of
International Training
on
“MODERN STORAGE TECHNOLOGIES IN AGRICULTURE”

for Participants of African and Asian Countries Under
Feed The Future India Triangular Training (FTF ITT)

In Collaboration with

National Institute of Agricultural Extension Management (MANAGE), Hyderabad

Date: 1st – 15th September, 2017

Dr. R.K. Gupta

Course Director & Director ICAR-CIPHET, Ludhiana

Dr. R.K. Vishwakarma

Co-Course Director

Dr. V. Eyarkai Nambi

Co-Course Director



हर कदम, हर डगर

किसानों का हमसफर

भारतीय कृषि अनुसंधान परिषद

Agrisearch with a human touch



भाकृअनुप - केन्द्रीय कटाई उपरान्त अभियांत्रिकी एवं प्रौद्योगिकी संस्थान,
लुधियाना-141004 (पंजाब)

**ICAR- Central Institute of Post-Harvest Engineering and Technology,
P.O. PAU Campus, Ludhiana-141004 (Punjab)**

(An ISO-9001:2015 Certified Institute)



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1. INTRODUCTION

1.1. About Feed The Future – India Triangular Training

Feed the Future India Triangular Training (FTF ITT) program is a joint effort of USAID and Govt. of India for fostering triangular cooperation for adapting technological advances and innovative solutions to address Food Security Challenges in Africa. The programme is expected to enable India and the U.S. to share improved agricultural technologies worldwide, helping countries in Africa and Asia revolutionize their agriculture practices and ultimately, improve global nutrition levels. The FTF-ITT program was launched on 25th July, 2016 at New Delhi. Flagged off in 25th July 2016, this program aims to build capacities of 1400 agricultural professionals from 17 partner countries of Africa and Asia by 2020. The National Institute of Agricultural Extension Management (MANAGE), Hyderabad is implementing the program in collaboration with various Subject Matter Institutions.

1.2. Background about Training

Agricultural and horticultural produce are very important part of human diet. The agricultural and horticultural crops production has been steadily increasing due to advancement in production technology and high yielding varieties development, but improper handling and storage of these commodities results in high losses before reaching to the consumers. Storage is the most important aspect of food supply chain that ensures food security and round-the-year quality food supply of a country. According to World Bank Report, the food grains and perishables wasted due to improper storage could be sufficient to feed one third of world poor population.

Quantitative as well as qualitative losses occur during storage due to physiological changes, insects, rodents, and micro-organisms. Storage conditions, environmental factors, gas composition, management practices etc. Affect the shelf life and quality of horticultural produce to great extent. Large number of insect pests has been reported to be associated with stored grains, which is directly related to geographical and climatic conditions. Hence, the present course is proposed considering the vital need of capacity building and trained manpower in modern and effective storage techniques for agricultural and horticultural commodities. Special emphasis is given for design and maintenance of on-farm low cost storage structures for food grains and evaporative cooled storage structures for perishables.

With this background ICAR-Central Institute of Post Harvest Engineering and Technology, Ludhiana in collaboration with MANAGE, Hyderabad had hosted Feed The Future India Triangular Training (FTF ITT) program on Modern Storage Technologies in Agriculture during 01 Sep' 2017 to 15 Sep' 2017 at ICAR-CIPHET, Ludhiana.

1.3.About Host Institute (ICAR-CIPHET)

The ICAR-Central Institute of Post-Harvest Engineering and Technology (ICAR-CIPHET) was established on 29th December 1989 at Ludhiana, Punjab (India); as a nodal institute to undertake lead Researches in the area of post-harvest engineering and technology appropriate to agricultural production catchments and agro-industries. The institute's second campus was established on 19th March 1993 at Abohar, Punjab and is primarily responsible for conducting research and development activities on fruits and vegetables. ICAR-CIPHET is also headquartering two All India Coordinated Research Projects (AICRPs) viz. AICRP on Post-Harvest Engineering and Technology (PHET) with 30 Centers and AICRP on Plasticulture Engineering and Technology (PET) with 14 Centers.

ICAR-CIPHET is a pioneer organization mandated to undertake lead researches in the area of postharvest engineering and technology appropriate to agricultural production catchment and agro-industries. Being a nodal institute in the field of post-harvest processing, ICAR-CIPHET has developed a national database on post-harvest machinery/ equipment which is available on the institute website and can be continually updated. The institute has widened the horizons of research varying from development of processing machines to electronic gadgets for quality evaluation and maintenance. Apart from developing mechanical tools, we are also striving hard in the direction of providing biological tools for processing and value addition to agro-produce. So far institute has designed and developed more than 45 machineries and 55 processes and technologies in the field of post harvest engineering and technology of agricultural produce.

Available facilities/ laboratories

- Food Testing cum Certification Lab
- Post Harvest Machine Testing Centre
- Agricultural Structures & Environment Control Lab
- Livestock Products Processing Lab
- Surface Plasmon Resonance (SPR) Unit

- Non Destructive Quality Evaluation Lab
- Food Packaging and Transportation Lab
- Bio Process Engineering Lab
- Cleaning, Grading and Drying Laboratory
- Product development and by-product utilization laboratory
- Food quality and safety laboratory
- Bioengineering properties laboratory
- Processing and product development laboratory
- Product Quality Analysis Laboratory

1.4.Main Objectives of the training

- Introduce the concept of different storage techniques/systems available for major food grains and horticultural produce storage in developing countries.
- Design, construction and management of low-cost evaporative cooled storage structures for perishables.
- Sensitizing the participants about insect control, fumigation and other quality control of stored grain ecosystems
- Demonstrate the bulk storage systems with effective handling of food grains, Controlled Atmosphere (CA) storage & Modified Atmosphere storage for horticultural produce.
- Visit to mechanized storage systems (Bulk/ Bin storage) and bag storage systems, CA storage, multi-commodity cold storage, pack house presently available and interaction with the stakeholders.

1.5.Key Focus areas of the training Module

The training course shall give overall perspective about the different storage systems available in the developing countries especially in African and Asian countries and recent developments in handling and storage. Due emphasis is given on concepts of stored grain ecosystems, quality and insect control in the stored grains, different type of fumigation methods/systems, fumigation standards, plant quarantine operations etc. Physiology of horticultural produce will be explained to manage optimum storage conditions and quality assurance. Design and operational aspects of evaporative cooled storage, cold storage, modern

methods like CA storage, delayed ripening processes, multi-commodity cold storage systems, etc are covered. The concept of cold chain and its management will be described to handle horticultural produce efficiently. The training also covers the role of ripening chambers, pack-house operations and gas composition controls in efficient supply chain management of perishables.

The training also gives overview of bulk grain handling, transportation and storage, suitability of bulk storage, convenient of bulk storage over bag storage, issue/ problems with the existing system of storage in the developing countries. Hands-on exposure would be given to the trainees about the unit operations related to storage of food grains and horticultural produce. The course will also have the study visits of different storage systems currently being practised in India. About 50% time shall be devoted in lecture-cum-interaction sessions, 50% time on hands on practices cum field demonstrations.

2. LIST OF PARTICIPANTS

Sl.No.	Name of the Executive & Address Afghanistan	Photo
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1. **Mr. Fazli Rahullah**
Emergency Response and Database Head
Cereal Strategic Storage and Food Security
Department,
Ministry of Agriculture, Irrigation and
Livestock, Jamal Mina,
District-3, Kabul University Road,
Kabul, Afghanistan
Tel: + 93 (0) 748000362, + 93 (0) 785871983,
Email: r.fazli1979@gmail.com,



2. **Mr. Noori Abdul Sami**
Food Bank Manager
Food Security and Grain Strategic Reserves
Department,
Ministry of Agriculture, Irrigation and
Livestock, Jamal Mina,
District-3, Karta Sakhi Squire,
Kabul, Afghanistan
Tel: + 93 (0) 774317375, + 93 (0) 775791842
Email: sami.nooril1@yahoo.com



Botswana

3. **Ms. Moatswi Chakubinga**
Post-Harvest Officer
Private Bag 0091, Ministry of Agriculture,
Crop Production,
Gabrone, Botswana
Tel: +267 72614383, +267 3928745, Fax: +267
39287628
Email: ccmoatswi@gov.bw,
mgmoatswi@gov.bw



4. **Mr. Thero Peter**
Agricultural Scientific Officer/Plant Protection
Officer,
Ministry of Agriculture, Development and Food
security,
Crop Production, P.O.Box. 300,
Mahalapye, Botswana
Tel: +256 71633346, Fax: +256 4710678
Email: pthero@gov.bw, imorapedi@gov.bw



Cambodia

5. **Ms. Khieu Sokny**
Vice Chief Academic Affair Officer,
Prek Leap National College of Agriculture,
Highway 6A, Sangkat Prek Leap, Khan
Chroychangva,
Phnom Penh, Cambodia
Tel: +855 236910595, +855 12588010
Email: khieusokny@yahoo.com,
info@pnsa.edu.kh,



Ghana

6. **Ms. Kwawu Patience**
Assistant Agricultural Officer,
Ministry of Food and Agriculture, Women in
Agriculture Development,
P.O.Box.M37, Ministries,
ACCRA, Ghana
Tel: 023324966970, 00233249615225
Email: pgbediame@yahoo.com,
gershon@gmail.com



7. **Mr. Frimpong-Manso Justice**
Agricultural Engineering Services
Directorate of MOFA, P.O.Box. M82, Giffard
Road, Burma Camp
Accra, Ghana
Tel: +233302777789, +233244409133
Email: aesdmofa@hotmail.com,
yawbadu29@gmail.com



Kenya

8. **Mrs. Gitahi Faith Wangui**
Assistant Director of Livestock Production,
Department of Livestock Production,
Ministry of Agriculture, Livestock and
Fisheries Development,
P.O.Box. 34188, Nairobi, Kenya
Tel: 0725208143,
Email: faithwanguigitahi@yahoo.com,
jgkahuro@gmail.com,
josphinekamaun@gmail.com,



9. **Mr. Gichuki Stephen Mutonyi**
Principal Livestock Production,
AHITI Ndomba Institute,
Ministry of Agriculture, Livestock and
Fisheries Development,
P.O.Box.32 10300, Kerugoya,
Nairobi, Kenya,
Tel: 0702096724, 0722610008
Email: gichukiwajoy@yahoo.com,
ahitindomba@gmail.com,



Liberia

10. **Mrs. Lydia P. Kerkula**
Livestock Officer,
Central Agriculture Research Institute (CARI)
P.O.YMCA Community, GSA Road, Bong
County,
Liberia
Tel: +231 886375191,
Email: zephanielc@gmail.com,
akarnuah9@gmail.com



Malawi

11. **Mr. Frank John**
Agricultural Extension Development Officer
(AEDO)
Ministry of Agriculture, Irrigation and Water
Development
(Agricultural Extension Services Department)
Chiradzulu Agricultural District
P.O. Box 28, Chiradzulu, Malawi
Ph:(265) 999 002 180/881368 077/ (265) 999
002 180/881 368 077
Email: johnfrank261@gmail.com,
12. **Ms. Musaiwa Priscilla**
Agricultural Extension Development Officer
Lunzu EPA, P.O.Box. 32, Ministry of
Agriculture / Extension,
Blantyre, Malawi
Mob: 0999704955, 0884011912
Email: (Not mentioned in Application),
mikedaka2016@gmail.com (Husband),
noellalimbani@gmail.com,
nevlimbani@yahoo.com (POC)



Mongolia

13. **Mr. Lkhagvasuren Khosbayar**
Agronomist,
USUH TARIA LLC,
Room No.115, Selenge Trade Centre,
Sukhbaatar Soum,
Selenge Province, Mongolia
Telefax: 97670492233, Mob: 97699882126
Email: usuhtaria@yahoo.com,
jester.hosoo@yahoo.com,



Myanmar

14. **Mr. Zeya Kyaw**
Deputy Staff Officer,
Office No.43, Department of Agriculture,
Department of Agriculture, Ministry of
Agriculture, Livestock and Irrigation,
Nay Pyi Taw, Myanmar
Tel: +95 9428134356, Fax: +95 674410067
Email: kyawzeyapma@gmail.com,
director.extension.doa@gmail.com



15. **Mr. Win Naing Tun**
Staff Officer,
Department of Agriculture, Minkin Township,
Department of Agriculture, Ministry of
Agriculture, Livestock and Irrigation,
Sagaing Region, Myanmar
Telefax: +9567 410067, +95 98302460
Email: nandasoe@gmail.com,
director.extension.doa@gmail.com



Sudan

16. **Mohammad Ammar Balla**
Agricultural Engineering,
Ministry of Agriculture, Agricultural
Engineering and Services Administration,
Karthoum, Sudan
Tel: 49183765680, 00249912263722
Email: e.ammar.hamad@gmail.com



17. **Mrs. Omer Weldon Mohammad Osman**
Agricultural Engineering,
Ministry of Agriculture, Agricultural
Engineering and Services Administration,
Karthoum, Sudan
Tel: 0049193765680, 00249127126817
Email: weldanosman@gmail.com,
agrieng@yahoo.com,



18. **Mrs. Thowiba Omer Elhassan Mustafa**
Agricultural Engineering,
Ministry of Agriculture, Agricultural
Engineering and Services Administration,
Karthoum, Sudan
Tel: 0049193765680, 0024918594433
Email: nadiahamza14@gmail.com,
agrieng@yahoo.com



Uganda






19. **Ms. Nakamya Sarah**
 Principal Agricultural Officer / District
 Agricultural Officer
 Production Department, Nakasongola District
 Local Government,
 P.O.Box. 1, Nakasongola
 Uganda
 Tel: +256 777525652
 Email: xnakamya@gmail.com,


















20. **Mr. Lubwama Joseph Ntege**
 Principal Inspector of Schools
 C/o. Ministry of Education and Sports,
 Directorate of Education Standards-Kyambogo,
 P.O Box, 7063,
 Kampala, Uganda
 Telephone/Mobile: 0772822554 / 0701822554
 Email: lubwesa@yahoo.com,
lubwamajoanne@gmail.com,











2.1. Country wise and Gender wise participation

S.No.	Country	No. of Participants
1	 Afghanistan	 2
2		 

	Botswana	1	1
3	 Cambodia	 1	
4	 Ghana	 1	 1
5	 Kenya	 1	 1

6	 <p data-bbox="626 575 732 611">Liberia</p>	 <p data-bbox="1159 474 1175 506">1</p>
7	 <p data-bbox="626 1079 732 1115">Malawi</p>	 <p data-bbox="1057 926 1073 957">1</p>  <p data-bbox="1235 909 1252 940">1</p>
8	 <p data-bbox="613 1457 748 1493">Mangolia</p>	 <p data-bbox="1159 1430 1175 1461">1</p>

9	 <p data-bbox="609 682 747 724">Myanmar</p>	 <p data-bbox="1153 483 1177 514">2</p>	
10	 <p data-bbox="633 1113 722 1155">Sudan</p>	 <p data-bbox="1055 1039 1079 1071">1</p>	 <p data-bbox="1234 1018 1258 1050">2</p>
11	 <p data-bbox="625 1501 738 1543">Uganda</p>	 <p data-bbox="1055 1459 1079 1491">1</p>	 <p data-bbox="1234 1449 1258 1480">1</p>

3. INAUGURATION OF THE PROGRAMME

The training program was inaugurated on 3rd September 2017 by the Chief Guest Dr. C. Vasudevappa, Honorable Vice Chancellor, NIFTEM, Haryana in presence of Dr. P. Chandra Shekara, Director, MANAGE, Hyderabad as Guest of Honour. The details

program schedule was as given below.

Time	Programme
10.00 -10:30 am	: Assembling in Conference Hall
10.30 am	: ICAR Song
10.32 am	: Welcoming Guest – Dr. V.E. Nambi
10.40 am	: Lighting Lamp
10.45 am	: Introduction of Participants
10.55 am	: Address by Dr. R.K. Gupta, Director ICAR-CIPHET & Course Director
11.15 am	: Address by Dr. P. Chandra Shekara, Guest of Honour
11.30 am	: Address by Dr. C. Vasudevappa, Chief Guest
11.50 am	: Felicitating Guests
11.55 am	: Releasing the Course Compendium
11.57 am	: Vote of Thanks- Dr. R.K. Vishwakarma
12.00 pm	: Group Photo

Dr. V.E.Nambi, Co-Course Director, of the training program welcomed the guests and the participants. Dr. C. Vasudevappa, Honorable Vice Chancellor, NIFTEM was the Chief Guest and Dr. P. Chandra Shekara, Director, MANAGE, Hyderabad was the Guest of Honour. Dr. R.K. Gupta, Director ICAR-CIPHET formally welcomed the guests and briefed the audience about the training program. Chief Guest Dr. C. Vasudevappa, Honorable Vice Chancellor, NIFTEM highlighted the need to understand technology requirements for storage. He emphasized that it is high time when we should work on production of quality crops, their primary processing and storage. He also discussed the major challenges. Dr. P. Chandra Shekara, Director, MANAGE who is instrumental in collaborating with delegates informed that the theme of training was selected on the basis of need and demand raised by the participating countries. Program was coordinated by Mrs. Surya, Scientist, and it ended with vote of thanks by Dr. R.K. Vishwakarma, Senior Scientist and Co-Course Director, to the guests, participants and staff of ICAR-CIPHET, Ludhiana.

3.1. Some of the inaugural function events



Arrival of Guests and Participants at ICAR-CIPHET Conference Hall



**Inaugurating the function by lighting the lamps by Dr.C.Vasudevappa, Hon'ble VC,
NIFTEM**



Inaugurating the function by lighting the lamps by Dr.P.Chandrashekara, Director, MANAGE



Inaugurating the function by lighting the lamps by Mrs. Patience, Participant from Ghana



**Dr.R.K.Gupta, Director, ICAR-CIPHET welcoming Dr.C.Vasudevappa, Hon'ble VC,
NIFTEM**



**Dr.R.K.Gupta, Director, ICAR-CIPHET welcoming Dr.Chandrashekara, Director,
MANAGE**



Releasing of Course Compendium



Group Photo after inaugural Function

Some more glimpses during inauguration





4. DAY WISE PROGRAM SCHEDULE

Day & Time	Program	Resource person
Day- 1: 01.09.2017		
10:30-11:30	Registration	Dr. V. E. Nambi, Scientist
11.30-11:45	Tea Break	
11:45-13:00	Pre Training Test	Dr.R.K.Viswakarma and Dr. V. E. Nambi, Scientist
13:00-14:00	Lunch	
14:00-15:00	Medical and Legal formalities, Group formation	Person from MANAGE
15.00-15.15	Tea Break	
15.15-17:00	Socialization and Country profile of participants	Dr.R.K.Viswakarma and Dr. V. E. Nambi, Scientist
Day-2: 02.09.2017		

10:00-11:30	Current scenario of Processing and Value addition and CIPHET technologies	Dr.R.K.Gupta, Director ICAR-CIPHET
11:30-11:45	Tea-break	
11:45-13:00	Design of fumigation chamber for quarantine insect pests control for export	Dr. R. K. Vishwakarma, Sr. Scientist
13:00-14:00	Lunch	
14:00-15:15	PCM and solar energy based cold rooms: principles and practices	Dr. Sakharam Kale, Scientist
15:15-15:30	Tea break	
15:30-17:00	Visit to labs and pilot plants at CIPHET, Ludhiana	Dr. Ranjeet Singh, Sr. Scientist
Day-3: 03.09.2017: Sunday		
Inauguration of training Program High Tea & Group Photo		
Day-4: 04.09.2017		
10:00-11:30	Cold chain management of horticultural crop produce	Dr. R. K.Gupta, Director
11:30-11:45	Tea-break	
11:45-13:00	Design and construction of bulk storage system	Dr. V. E. Nambi, Scientist
13:00-14:00	Lunch	
14:00-17:00	Visit to of grains storage warehouse of Food Corporation of India at Ludhiana	Dr. D. Saha, Scientist
Day-5: 05.09.2017		
10:00-11:30	Short term storage systems for food grains	Dr. Sandeep Mann, Pr. Scientist
11:30-11:45	Tea-break	
11:45-13:00	Ripening chambers and their role in post-harvest management of fruits and vegetables	Dr. B. V. C. Mahajan, PHPHTC, Ludhiana
13:00-14:00	Lunch	
14:00-17:00	Minimal processing, packaging and storage of fruits and vegetables + Hands on training	Dr. Rahul K. Anurag, Scientist
Day-6: 06.09.2017		

10:00-11:30	Bags storage and Cover & Plinth storage system for food grains	Dr. M. S. Alam, Prof, PAU
11:30-11:45	Tea-break	
11:45-13:00	Storage & Post-harvest Perspectives of Rice & Maize	Dr. S. K. Nanda, Head, FG&OP Division
13:00-14:00	Lunch	
14:00-17:00	Visit to Field Fresh, Ladoowal. pack house operations and cold chain management practices	Dr. V. K. Saharan, CTO
Day-7: 07.09.2017		
10:00-11:30	Foldable Bulk Grain Storage System	Mr.Ravindra Dekate
11:30-11:45	Tea-break	
11:45-13:00	Strategies of grain storage & quality control in Food Corporation of India	Dr.C.L.Ram, DM FCI
13:00-14:00	Lunch	
14:00-15:15	Overview of Grain storage in Global perspective	Dr.K.Alagusundaram, DDG (Engg.), New Delhi
15:15-15:30	Tea Break	
15:30-17:00	Grain storage practices and handling systems in India	Dr.K.Alagusundaram, DDG (Engg.), New Delhi
Day-8: 08.09.2017		
10:00-11:30	Warehouse and silo management practices	Dr.I.C.Chadda, CWC
11:30-11:45	Tea-break	
11:45-13:00	Effective fumigation methods and practices	Dr.I.C.Chadda, CWC
13:00-14:00	Lunch	
14:00-17:00	Visit of M/s Fateh Cold Storage, Pratappura, Ludhiana	Dr. V. K. Saharan, CTO
Day-9: 09.09.2017		
10:00-11:30	Sensors and Machine Vision Systems for quality monitoring of stored eco-system	Dr. V. E. Nambi, Scientist
11:30-11:45	Tea-break	

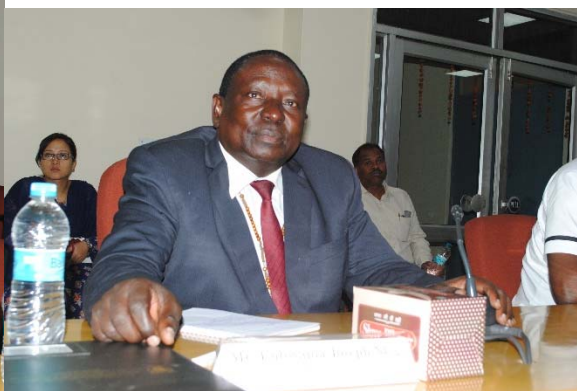
11:45-13:00	Plasticulture Technology for drying and grain Storage	Dr.R.K.Singh, PC, AICRP on PET
13:00-14:00	Lunch	
14:00-15:15	Silo bag storage Systems for developing countries	Mr.M.C.Verma
15:15-15:30	Tea-break	
15:30-17:00	Design of Silo storage Systems	Mr.M.C.Verma
Day-10: 10.09.2017 (Sunday- Holiday)		
Visit to multi commodity cold storage facility, Amritsar		
Day-11: 11.09.2017		
10:00-11:30	CA and MA storage for food grains and perishables	Dr. Ranjeet Singh, Sr. Scientist
11:30-11:45	Tea-break	
11:45-13:00	Stored grain insects pests and their new control methods in bulk storage systems	Dr.S.Subramanian, IARI, New Delhi
13:00-14:00	Lunch	
14:00-15:15	Hermatic Storage of Food Grains	Dr.M.K.Garg, HAU, Hisar
15:15-15:30	Tea- Break	
15:30-17:00	Alternate Fumigation like CO ₂ , Ozone and Cold Plasma- Promises & Pitfalls	Dr.V.Chandrasekar
Day-12: 12.09.2017		
10:00-11:30	Challenges and Perspectives of Grain storage	Dr.S.M.Ilyas, Ex-Director, ICAR-CIPHET
11:30-11:45	Tea-break	
11:45-13:00	Grain silo structures: structural considerations, erection, commissioning protocols and practices	M. Vasudeva
13:00-14:00	Lunch	
14:00-15:15	Economics of Food Grain Storage in Silos vis-à-vis Bag Storage	M. Vasudeva
15:15-15:30	Tea Break	

15:30-17:00	Project profile formulation, finances and establishment of small Food Processing enterprise	Dr.R.K.Viswakarma
Day-13: 13.09.2017		
Visit to Bulk Grain Storage Facility, Moga & Pack House Operations, Abohar		
Day-14: 14.09.2017		
10:00-11:30	Loss assessment methods in grain storage	Dr. S. K. Nanda, Head, FG&OP Division
11:30-11:45	Tea-break	
11:45-13:00	On-Farm storage/ Evaporative cooled room design and construction	Dr.S.N.Jha, ADG(FE), New Delhi
13:00-14:00	Lunch	
14:00-17:00	Quality evaluation of stored food products (Theory+Practical)	Dr. D. Mridula, Pr. Scientist
Day-15: 15.09.2017		
10:00-11:30	Post Training Test & Interactive meeting with participants	Dr. V. E. Nambi, Scientist
11:30-11:45	Tea-break	
11:45-13:00	Synthesis, evaluation and feedback	Dr. R.K.Viswakarma, Sr.Scientist
13:00-14:00	Lunch	
14:00-17.00	Closing ceremony of training & High Tea	Dr.R.K.Viswakarma and Dr. V. E. Nambi, Scientist Person From MANAGE
Day-16: 16.09.2017: Departure		

The details course material for each lectures was prepared and given to each participants which is enclosed with this report

4.1.SOME OF THE MOMENTS DURING VARIOUS CLASSES





4.2.SOME OF THE SNAPS DURING STUDY VISITS



While visiting the Twin screw extrusion unit of FG&OP Division



While visiting the food grain processing lab of FG&OP Division



While visiting the Non-destructive quality evaluation lab of AS&EC Division



While visiting the Bio-processing lab of FG&OP Division



While visiting the Agro Processing Unit



While visiting the Punjab Post Harvest Technology Centre



While visiting the Field Fresh P. Ltd



While visiting the Cold Chamber / Ripening Chambers at Punjab Agricultural University



While doing practical class on minimal processing of perishables



While visiting the Punjab Post Harvest Technology Centre



While visiting the Punjab Agricultural University Museum



While visiting the Goodwin Agro P Ltd

4.3. SOME OF THE JOYOUS MOMENTS DURING THE TRAINING PROGRAMS







5. BLISSFUL MOMENTS DURING CULTURAL EVENING











6. PERFORMANCE OF PARTICIPANTS

6.1. Pre & Post Test Evaluation Scores

Sl.No.	Name of the Executive & Address	Pre Test Score (out of 25)	Post Test Score (out of 25)
1.	Mr. Fazli Rahullah	9	16
2.	Mr. Noori Abdul Sami	7	16
3.	Ms. Moatswi Chakubinga	12	16
4.	Mr. Thero Peter	17	20
5.	Ms. Khieu Sokny	4	10
6.	Ms. Kwawu Patience	16	20
7.	Mr. Frimpong-Manso Justice	13	22
8.	Mrs. Gitahi Faith Wangui	17	21
9.	Mr. Gichuki Stephen Mutonyi	10	19
10.	Mrs. Lydia P. Kerkula	3	9
11.	Mr. Frank John	8	17
12.	Ms. Musaiwa Priscilla	10	18
13.	Mr. Lkhagvasuren Khosbayar	12	15
14.	Mr. Zeya Kyaw	9	13
15.	Mr. Win Naing Tun	10	12
16.	Mohammad Ammar Balla	7	11
17.	Mrs. Omer Weldon Mohammad Osman	8	14
18.	Mrs. Thowiba Omer Elhassan Mustafa	11	15
19.	Ms. Nakamya Sarah	12	18
20.	Mr. Lubwama Joseph Ntege	3	14

7. Evaluation and Feed Back

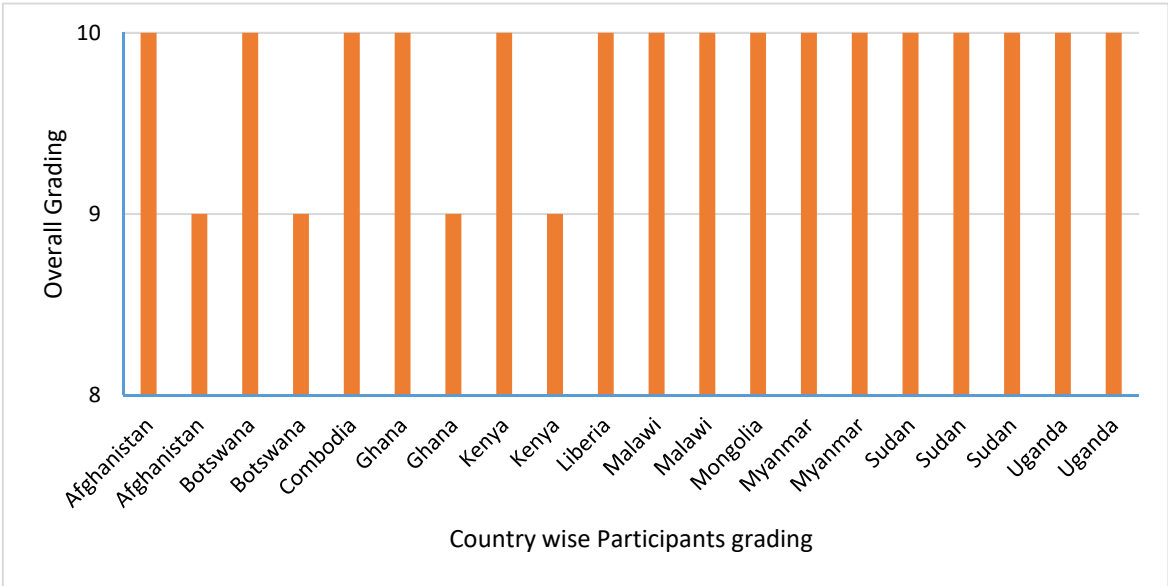
7.1. Evaluation Scores Participants about the Training Program

S.No.	Technical Session	Avg. Score (Out of 10)
1	Pre Training Test	9.75
2	General Instruction, Medical and Legal formalities,	9.55
3	Group formation	9.7
4	Socialization and Country profile of participants	9.75
5	Current scenario of Processing and Value addition and CIPHET technologies	9.55
6	Changing Face of Food Processing and Value Addition in India	9.25
7	Design of fumigation chamber for quarantine insect pests control for export	9.4
8	PCM and solar energy based cold rooms: principles and practices	9.3

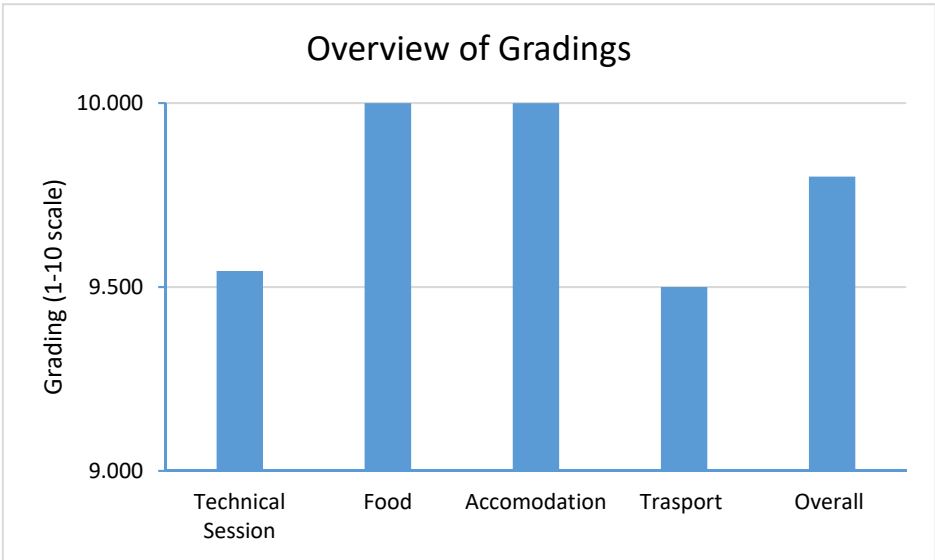
9	Visit to labs and pilot plants at CIPHET, Ludhiana	9.4
10	Cold chain management of horticultural crop produce	9.4
11	Design and construction of bulk storage system	9.3
12	Visit to of grains storage warehouse of Food Corporation of India at Ludhiana	9.5
13	Short term storage systems for food grains	9.55
14	Ripening chambers and their role in post-harvest management of fruits and vegetables	9.45
15	Minimal processing, packaging and storage of fruits and vegetables + Hands on training	9.4
16	Bags storage and Cover & Plinth storage system for food grains	9.65
17	Storage & Post-harvest Perspectives of Rice & Maize	9.15
18	Visit to Field Fresh, Ladoowal. pack house operations and cold chain management practices	9.45
19	Post Harvest value addition for Asian and African Countries	9.5
20	Foldable Bulk Grain Storage System	9.7
21	Strategies of grain storage & quality control in Food Corporation of India	9.4
22	Overview of Grain storage in Global perspective	9.7
23	Grain storage practices and handling systems in India	9.7
24	Warehouse and silo management practices	9.5
25	Effective fumigation methods and practices	9.75
26	Visit of M/s Gowin Cold Storage, Lalru, Punjab	9.7
27	Sensors and Machine Vision Systems for quality monitoring of stored eco-system	9.7
29	Silo bag storage Systems for developing countries	9.65
30	Design of Silo storage Systems	9.8
31	CA and MA storage for food grains and perishables	9.45
32	Stored grain insects pests and their new control methods in bulk storage systems	8.85
33	Hermatic Storage of Food Grains	9.5
34	Alternate Fumigation like CO ₂ , Ozone and Cold Plasma- Promises & Pitfalls	9.55
35	Challenges and Perspectives of Grain storage	9.35
36	Safe Long Term Storage of Grains in Indian Condition: Operational challenges	9.55
37	Equipment for Fumigation of Grains in Silos	9.8
38	Grain silo structures: structural considerations, erection, commissioning protocols and practices	9.5
39	Economics of Food Grain Storage in Silos vis-à-vis Bag Storage	9.8
40	Project profile formulation, finances and establishment of small Food Processing enterprise	9.45
41	Loss assessment methods in grain storage	9.4

42	On-Farm storage/ Evaporative cooled room design and construction	9.555
43	Quality evaluation of stored food products (Theory +Practical)	9.85
44	Post Training Test & Interactive meeting with participants	9.7
45	Synthesis, evaluation and feedback	9.7
46	Closing ceremony of training & High Tea	9.85
47	Food facility	10
48	Accommodation facility	10
49	Transport facility	9.5
50	Overall impression about Training Program	9.8

7.2. Country wise Overall grading about the training



7.3.Overall Grading under Various Heads



8. VALEDICTORY SESSION

The valedictory session of the training program was conducted on 14th September 2017 with Dr.K.Alagusundaram, DDG(Engg.), ICAR as Chief Guest. The details program schedule was as given below.

Time	Programme
11.30 -11:45 am	: Assembling in Conference Hall
11.45 am	: ICAR Song
11.50 am	: Welcoming Guest – Dr. V.E. Nambi
11.55 am	: Address by Dr. R.K. Gupta, Director ICAR-CIPHET & Course Director
12.00 pm	: Address by Dr. K.Alagusundaram, Chief Guest
12.30 pm	: Certificate Distribution
12.45 pm	: Feedback by participants
1.00 pm	: Vote of Thanks- Dr. V.E.Nambi

Dr. V.E.Nambi, Co-Couse Director, of the training program welcomed the chief guest and the participants. Dr. R.K. Gupta, Director ICAR-CIPHET formally welcomed the DDG(Engg.) with flower bouquet and presented about the overview of the training program and its content and the course report and overall performance of the trainees. Dr.K.Alagusundaram, DDG(Engg.) ICAR has explained the importance of bulk grain storage over the bag storage system widely adopted in developing countries. He stressed upon proper policy need to be formulated by the government agency for protecting and containing the post harvest grain loss during storage. He pointed out not only quantity loss, but also qualitative loss of food grains during storage. After chief guest address, the certificates were distributed. Then feedback from the participants was asked from each country person. Finally the valedictory function ended by vote of thanks given by Dr.V.E.Nambi. Some of the snaps of valedictory function are given below.



Chief guest was welcomed by one of the participant from Mangolia



While Chief Guest addressing the valedictory function



While Distributing Certificates



While one of the participant from Uganda giving his feed back about training



While one of the participant from Cambodia handing over memento for Course Director



While participants handing over memento for Course co-Directors