



**Report of**  
**Feed the Future India Triangular Training (FTF ITT) program**  
on  
**“ENTREPRENEURSHIP DEVELOPMENT IN FOOD PROCESSING”**

In Collaboration with  
**MANAGE, Hyderabad**

**17<sup>th</sup> April 2018 to 01<sup>st</sup> May**



**Dr. C. Anandharamakrishnan**  
Course Director & Director, IIFPT, Thanjavur, India

**Dr. N. Venkatachalapathy**  
Course Coordinator

**Er. C. K. Sunil**  
Course Co-coordinator

---

**INDIAN INSTITUTE OF FOOD PROCESSING TECHNOLOGY**  
Ministry of Food Processing Industries, Government of India Pudukottai Road,  
Thanjavur-613 005 Tamil Nadu, India.

## CONTENT

<b>S.No</b>	<b>Title</b>	<b>Page No</b>
<b>1.</b>	<b>Introduction</b>	<b>1</b>
1.1	About feed the future	<b>1</b>
1.2	Background about training program	<b>1</b>
1.3	About host institute	<b>1</b>
1.4	Main objectives of the training	<b>2</b>
1.5	Key focus areas of the training module	<b>2</b>
<b>2</b>	<b>Profiles of Executives</b>	<b>3</b>
<b>3</b>	<b>Methodology</b>	<b>8</b>
3.1	Training methodology	<b>8</b>
3.2	Study Materials	<b>8</b>
3.3	Resource persons	<b>8</b>
<b>4</b>	<b>Inauguration of the program</b>	<b>9</b>
<b>5</b>	<b>Day wise Program schedule</b>	<b>13</b>
5.1	Technical lecture and demonstration sessions	<b>18</b>
5.2	Field visits	<b>33</b>
5.3	Visit to places of historical and cultural importance	<b>36</b>
5.4	Cultural evening	<b>38</b>
<b>6</b>	<b>Training evaluation</b>	<b>40</b>
6.1	Evaluation of training session	<b>40</b>
6.2	Pre and post training test	<b>41</b>
6.3	Post training monitoring	<b>43</b>
6.4	Back at home work plan	<b>43</b>
<b>7</b>	<b>Valedictory</b>	<b>43</b>
<b>8</b>	<b>Annexure</b>	

## **FEED THE FUTURE INDIA TRIANGULAR TRAINING ON ENTREPRENEURSHIP DEVELOPMENT IN FOOD PROCESSING**

### **1 Introduction:**

#### **1.1 About feed the future:**

**Feed the Future Initiative (FTF)** was launched in 2010 by the United States government and the Obama Administration to address global hunger and food insecurity. According to the National Institute of Food and Agriculture, it is "the U.S. government's global food security initiative." The Feed the Future Initiative began as an effort "to combat the global food price spikes of 2007 and 2008." In 2009 President Barack Obama committed \$3.5 billion over a 3-year period to a global initiative with the intent of combating hunger and poverty; in May 2010 the United States Department of State launched the Feed the Future Initiative. The Initiative was developed by the Department of State and is coordinated primarily by the U.S. Agency for International Development (USAID). The main objectives of the initiative are the advancement of global agricultural development, increased food production, food security and improved nutrition particularly for vulnerable populations such as women and children.

#### **1.2 Background of training program:**

The program on Entrepreneurship Development in Food Processing incorporates specialized modules to cover recent trends and advances in food process, global food business, policy transitions, trade investments and safety regulations in food business. Understanding the technological advancements and commercial viability of food business has also been a part of the program. In addition, the course has a special component of managerial skill workshops, enabling capacity building, leadership development and assertive trainings, which enhance the skills of the prospective entrepreneurs in Food processing.

#### **1.3 About host institute – IIFPT**

The Indian Institute of Food Processing Technology (Formerly Indian Institute of Crop Processing Technology) is a pioneer to be added Research and Educational Institution under the Ministry of Food Processing Industries, Government of India. **Dr.V. Subrahmanyam**, an eminent scientist and founder Director, Central Food Technological Research Institute, Mysore, after his retirement, started PPRC in 1967 as R & D laboratory

in the Modern Rice Mill complex of Thanjavur Co-operative Marketing Federation (TCMF) at Tiruvarur, Tamil Nadu, and India under the dedicated leadership and the able guidance of late.

The IIFPT with its modern laboratories equipped with hi-tech instruments, is engaged in the R&D of food grain processing, value addition, by-product utilization through bio-processing, process and product development. Our Food Quality Testing Laboratory is NABL accredited and FSSAI referral. We have a hi-tech and cottage level food processing incubation cum training center. Hands-on-training on different food processing technologies, renting facilities and other supports are offered all thought the year to help the entrepreneurs to put in their innovative ideas for the development of new products.

#### **1.4 Main objectives of the training**






The program on Entrepreneurship Development in Food Processing covers:

- Overview on food processing sector and food business in context to global scenario.
- Food business Environment & Policy
- Financial Management & Financing for Food Industries
- Advances in Food Processing technologies.
- Supply and Cold Chain Management
- Food Safety and Standards
- IPR and Management in Food
- Value Addition in Food Processing
- Food Packaging and Labeling
- Food Quality analysis and Quality control
- Government Regulations/Guidelines for Food Sector
- Visit to Food processing industries





#### **1.5 Key focus areas of the training module**

Identify emerging issues that could change or enhance the food business in the coming decades Understand the industry's main drivers of innovation, customers, technology and the environment and how to leverage them Identify emerging opportunities for growth in both domestic and international markets

## 2. Profiles of the executives:




Sl.No	Executive name and Address	Photo
<b>KENYA</b>		
1.	<p><b>Ms. Wanjohi Cathryn Wanjiru</b> Deputy Director of Veterinary Sciences State Department of Livestock, Directorate of Veterinary Sciences, Ministry of Agriculture, Livestock and Fisheries, Private Bag-00625, Nairobi, Kenya Tel: +254 2080 43441, 725609319 Email: infodvs@kilimo.go.ke, cwwanjohi@yahoo.com, harryoyas@yahoo.com</p>	
2.	<p><b>Mr. Nyakiti Gordon Ochieng</b> Senior Lecturer, Kenya School of Agriculture, P.O.Box.1909-10100, Nyri, Kenya Tel: +254 722 448701, 725256662 Email: jikazeb@yahoo.com, kenyaschoolofagriculture@yahoo.com</p>	
3.	<p><b>Mr. Wanjohi Bernard Kiregi</b> Agriculture Information &amp; Communication Specialist, Small Scale and Value Addition Project (SIVAP) State Department of Agriculture, P.O.Box-30028-00100, Ministry of Agriculture, Nairobi, Kenya Tel: +254 721 229 731, +254 722 872 960 Email: bkiregiwanjohi@gmail.com, mwaurakabui@gmail.com</p>	
4.	<p><b>Ms. Wasike Cynthia Naliaka</b> Self Employed Buruburu Phase 5 Extension, P.O.Box.73816-00200, Nairobi, Kenya Tel: +254 704021230, +254 725009766 (Supervisor) Email: cynthia.wasike@gmail.com, dgatwiri@gmail.com, (supervisor)</p>	
5.	<p><b>Ms. Thome Alice Mumbi</b> Chief Agricultural Officer, Kenya School of Agriculture, Ministry of Agriculture, Livestock and Fisheries, P.O.Box.7940-01000, Thika, Tel: 0722565091, 0728300909, +254 722448701 Email: ksasongambe@gmail.com, alice25thome@gmail.com, kenyaschoolofagriculture@yahoo.com</p>	

<b>LIBERIA</b>		
6.	<p><b>Mr. Varney, Emmis Fallah</b> Soil and Water Quality Technician, Technical Service Department, Ministry of Agriculture, Monrovia, Liberia Tel: +231 886543039, 778089249 Email: varneyemmisf@gmail.com, edibope@gmail.com</p>	
<b>MALAWI</b>		
7.	<p><b>Ms. Mwase Ethel</b> Agricultural Development Extension Coordinator, Ministry of Agriculture, Food Security, Nkhotakota District Agriculture Office, P.O.Box.41, Nkhotakota, Malawi Tel: 265 999253110, 999654306 Email: nayejethel@yahoo.com, mphatso08@gmail.com,</p>	
8.	<p><b>Mr. Chuma Madalitso</b> Program Manager, Kasungu Agricultural Development Division, Department of Agricultural Extension Services, Ministry of Agriculture, Irrigation and Water Development, P.O.Box.28, Kasungu, Malawi Tel: +265 999 925 661, 0991668033, Email: madalitso.chuma@yahoo.com, upephiri@gmail.com, gwazabannet@yahoo.com,</p>	
9.	<p><b>Mr. Makoka Yamikani Francis</b> Agriculture Extension Development Officer, Lilongwe District Agriculture Office, Ministry of Agriculture, Irrigation and Water Development, Private bag 36, Lilongwe, Malawi Tel: + (265) 888 212 081, + (265) 999 322 447/ + (265) 995 122 417, + (265) 888 369 657 (Supervisor) Email: yothes@yahoo.co.uk, tusyamwakamogo@gmail.com (Supervisor)</p>	

10.	<p><b>Ms. Kumwembe Annie</b> Principal, Zomba RTC, Private Bag.No.287, Zomba, Malawi Tel: 0888 169 688, 0999938625 Email: anniekumwembe@yahoo.com, pattersonkandoje@yahoo.com,</p>	
<b>MOZAMBIQUE</b>		
11.	<p><b>Ms. ChilauleCatiaPery</b> Technica Superior Agro-pecuaria N1, AV.25 de Setembro 2780, 1o Andar Directorate of Agriculture of Maputo City, ExtensaoAgraria Maputo, Mozambique Tel: +258 21314859, +258 828911700 Fax” +258 21323435 Email: davidchilaule@gmail.com, sergiovalentim@gmail.com</p>	
12.	<p><b>Mr. ChicuateNoe Carlos Francisco</b> Extensionist, Directorate of Agriculture and Food Safety of Maputo City 25 September Avenue, No.21314859/60 Maputo City, Mozambique Tel: +258 21323435, +258823106859 Fax: +25821430102 Email: chicuatenoe@hotmail.com, lucialuz_2007@yahoo.com.br,</p>	
13.	<p><b>Mr. Banze Lourenco Fernando</b> Extensionist, Directorate of Agriculture and Food Safety of Maputo City 25 September Avenue, No.21314859/60 Maputo City, Mozambique Tel: +258 258844506022, +258823106859 Fax: +25821430102 Email: lbanze07@gmail.com, lucialuz_2007@yahoo.com.br,</p>	

MYANMAR		
14.	<p><b>Mr. San Hitalar</b> Deputy Veterinary Officer Office No.36, Livestock Breeding and Veterinary Department, Ministry of Agriculture, Livestock and Irrigation Nay Pyi Taw, Myanmar Tel: +9567 3048385, Fax: +9567 3408342 Email:hitalarsanvet2009@gmail.com, stat.ibvd@gmail.com,</p>	
15.	<p><b>Ms. Su Sandi</b> Deputy Veterinary Officer Office No.36, Livestock Breeding and Veterinary Department, Ministry of Agriculture, Livestock and Irrigation Nay Pyi Taw, Myanmar Tel: +9567 3048198, +9567 3408044 Fax: +9567 3408342 Email: ir.lbvd@gmail.com, shwepoe575@gmail.com, moemoekhinedr@gmail.com, ytwvet@gmail.com</p>	
UGANDA		
16.	<p><b>Ms. Ateng Santa</b> Managing Partner, JJ Enterprises Limited, APAC Civil Society House, Market Street, Kampala, Uganda Tel: 0777155563 / 0775364050, 0783084639 Email: santaateng@gmail.com, oyugionono@gmail.com</p>	
17.	<p><b>Mr. Bilungi Dennis</b> Senior Fisheries Officer, Production and Marketing Department, Kisoro District Local Government, P.O.Box.123, KISORO, Uganda Tel: +256 775344614, Email: dennisfishkisoro@yahoo.com, dennisschool372@yahoo.com, basazash@yahoo.co.uk,</p>	



18.	<p><b>Mr. Muwadi John</b>  District Fisheries Officer,  Buyende District Local Government  P.O.Box.87, Kamuli  Tel: 0332280488, +256 752715979/776615979,  759698958 (Spouse), 256701229449  Email: buyendedistrict@gmail.com,  muwandijohn@gmail.com, fredrickkabbale@yahoo.co.uk</p>	
19.	<p><b>Mr. Nuwasiima Saverino</b>  Animal Husbandry Officer,  Production Department,  Mitooma District Local Government,  P.O.Box.98,  Bushenyi, Uganda  Tel: +256 776 880 441, +256 772 369 862  Email: n.saverino@yahoo.com,  godmuhumuza@gmail.com, (Supervisor)</p>	
20.	<p><b>Mr. Otunga Anthony</b>  Senior Fisheries Officer,  Department of Production and Marketing,  Amolatar District Local Government,  Namasale Road, P.O.Box.3,  Amolatar, Uganda  Tel: +256 754 327 369, +256 772688650  Email: amolatar.dpmo@gmail.com,  outungafish@gmail.com,</p>	

### **3. Methodology**

#### **3.1 Training methodology**

The methodology undertaken for the training program includes Lectures, discussions, experimental learning, demonstration and field visits. Each participant was encouraged to participate, contribute their ideas and take part in group activities. Time was allotted for discussion at the end of each lecture for participants to interact with the speakers. The participants were also given hands-on-training by the scientist on the topics discussion during the lecture sessions. Although, experiential learning methodology was effectively incorporated in the program, the participants were expected to emulate learning through group interaction, field visits and interactions with domain experts. A back at work plan was in-built to ensure the transformation of the participants learning into action at their workplace, once they return to their respective home countries. The effectiveness of the training was monitored carrying out pre and post training test and also to evaluate the impact of the training on the knowledge gained by the participants.

#### **3.2 Study Materials**

Study materials, prepared by IIFPT, Thanjavur on all the major themes were provided to the executives. The soft copies of all the presentations made during the sessions were also provided to the executives at the end of the course. More than 100 photographs of lectures, field visits and other important activities of program were also given to the Executives. The executives had full access to the net facility and library facility of IIFPT, Thanjavur.

#### **3.3 Resource personnel**

In addition to the faculty members from IIFPT, Thanjavur belonging to different disciplines from different divisions, following experts were invited to deliver the special lectures:

- **Dr.V.P.Sriraman**, Associate Professor and Chairperson: BIM-CDE, Bharathidasan, Institute of Management, Tiruchirapalli
- **Dr. G. Muralikrishna**, Chief Scientist and Professor, AcSIR- CFTRI (Retd).

- **Mr. Shankaran**, Managing Director, Frigoscan, Chennai, India
- **Dr. H. Prathap Kumar Shetty**, Professor & H.O.D, Department of Food Science and Technology, Pondicherry University, Pondicherry
- **Dr. Selvam**, Executive Director, Agribusiness and Marketing, TN
- **Dr. Bhimaraya Metri**, Director, IIM, Trichy

#### **4. Inauguration of the program**

Feed the Future India Triangular Training on “**Entrepreneurship Development in Food Processing**” was inaugurated by The Director of IIFPT, Dr.C.Anandharamakrishnan in the presence of Ms. Shakera Parveen, Program Executive, MANAGE on 18<sup>th</sup> April 2018. Dr.C.Anandharamakrishnan gave the introduction speech on “**Food processing sector and present scenario**”

#### **Glimpses of the Inauguration Function**









## 5. Day wise Program schedule

Day & Time	Program	Resource Person
<b>Day 1 -17 April 2018</b>		
10:00 to 11:30	Registration	Dr. Akash Pare, IIFPT, Thanjavur
11:30	<i>High Tea</i>	
12:00 to 12:30	Pre-test	Dr Amudhasurabhi, IIFPT, Thanjavur
12:30 to 13:30	Tour of IIFPT Facilities	Er. Sunil C K, IIFPT, Thanjavur
13:30	<i>Lunch Break</i>	
14:30 to 15:30	Introduction “ IIFPT, Thanjavur”	Dr Venkatachalapathy N, IIFPT, Thanjavur
15:30	<i>High Tea</i>	
15:45 to 17:00	Tour of IIFPT Facilities	Dr Venkatachalapathy N, IIFPT, Thanjavur
17:00	Day Adjourns	
<b>Day 2 -18 April 2018</b>		
10:00 to 11:30	Inauguration ceremony	
11:30	<i>High Tea</i>	
12:00 to 13:30	Introduction- Food processing sector, present scenario.	Dr. Anandharamakrishnan, Director, IIFPT, Thanjavur
13:30	<i>Lunch Break</i>	
14:30 to 15:30	Entrepreneurship in food processing- Importance, Drivers and Challenges	Dr.V.P.Sriraman Associate Professor and Chairperson: BIM-CDE Bharathidasan Institute of Management, Tiruchirapalli
15:30	<i>High Tea</i>	
15:45 to 17:00	Entrepreneurship in food processing- Importance, Drivers and Challenges	Dr.V.P.Sriraman Associate Professor and Chairperson: BIM-CDE Bharathidasan Institute of Management, Tiruchirapalli
17:00	Day Adjourns	
<b>Day 3 -19 April 2018</b>		
10:00 to 11:00	Unit operations in food Processing	Er. Sunil C K, IIFPT, Thanjavur
11:00to 12:00	Drying Technologies	Dr Yadav B K, IIFPT, Thanjavur
12:00 to 12:30	<i>High Tea</i>	
12:30 to 13:30	Demonstration and hands on training of Drying Technologies	Dr Yadav B K, IIFPT, Thanjavur
13:30	<i>Lunch Break</i>	
14:30 to 15:30	Processing of fruits and vegetables	Dr Chidanand D V, IIFPT, Thanjavur
15:30	<i>High Tea</i>	

15:45 to 17:00	Hands on training on Thermal processing of Foods	Dr. Shanmugasundaram S,IIFPT, Thanjavur
17:00	Day Adjourns	
<b>Day 4 -20 April 2018</b>		
10:00 to 11:00	Processing of cereals, pulses and millets	Dr Sulochana, IIFPT, Thanjavur
11.00 to 12.00	Hands-on training on Processing of cereals, pulses and millets	Dr Sulochana, IIFPT, Thanjavur
12:00	<i>High Tea</i>	
12.30 to 13.30	Value addition of cereals, pulses and millets	Dr Sulochana, IIFPT, Thanjavur
13:30	<i>Lunch Break</i>	
14:30 to 15:30	Processing of spices and plantation crops	Dr Jeyan Authur Moses, IIFPT, Thanjavur
15:30	<i>High Tea</i>	
15:45 to 17:00	Demonstration and Hands-on training on Processing of spices and plantation crops	Dr Jeyan Authur Moses, IIFPT, Thanjavur
17:00	Day Adjourns	
<b>Day 5 -21 April 2018</b>		
9:30 onwards	Institution and Industry Visit	Mr Arun and Ms Harshini, IIFPT, Thanjavur
<b>Day 6 -22 April 2018</b>		
Sunday		
<b>Day 7 -23 April 2018</b>		
10:00 to 11:00	Processing of Rice and byproducts utilization	Er Tito Anand, IIFPT, Thanjavur
11.00 to 12.00	Demonstration and Hand-on training on processing of Rice	Er Tito Anand, IIFPT, Thanjavur
12:00	<i>High Tea</i>	
12.30 to 13.30	Non destructive quality Evaluation methods	Er. Sunil C K, IIFPT, Thanjavur
13:30	<i>Lunch Break</i>	
14:30 to 15:30	Processing of Oil seeds and soybean and value addition	Dr Akash Pare, IIFPT, Thanjavur
15:30	<i>High Tea</i>	
15:45 to 17:00	Demonstration and hands-on training of Processing of Oil seeds and soybean and	Dr Akash Pare, IIFPT, Thanjavur



	value addition	
17:00	Day Adjourns	
<b>Day 8 -24 April 2018</b>		
10:00 to 11:00	Non thermal processing of foods	Dr. Mahendran R, IIFPT, Thanjavur
11.00 to 12.00	Demonstration and hands-on training of Non thermal processing of foods	Dr. Mahendran R, IIFPT, Thanjavur
12:00	<i>High Tea</i>	
12.30 to 13.30	Bakery and confectionary technologies – Demonstration	Dr Hema V, IIFPT, Thanjavur
13:30	<i>Lunch Break</i>	
14:30 to 15:30	Processing of Milk and milk products	Dr Sinija V R, IIFPT, Thanjavur
15:30	<i>High Tea</i>	
15:45 to 17:00	Hands-on training on Processing of Milk and milk products	Dr Sinija V R, IIFPT, Thanjavur
17:00	Day Adjourns	
<b>Day 9 -25 April 2018</b>		
10:00 to 11:00	Basics of food and nutrition	Dr. Muralikrishna G Chief Scientist and Professor, AcSIR- CFTRI (Retd).
11.00 to 12.00	Basics of food and nutrition	Dr. Muralikrishna G Chief Scientist and Professor, AcSIR- CFTRI (Retd).
12:00	<i>High Tea</i>	
12.30 to 13.30	IPR (Intellectual Property Rights) in Food Trade	Dr.Amudhasurabhi, IIFPT, Thanjavur
13:30	<i>Lunch Break</i>	
15.45	Hands-on training on Food Quality analysis	Dr Bhuvana, IIFPT, Thanjavur
17:00	Day Adjourns	
<b>Day 10 -26 April 2018</b>		
10:00 to 11:00	Supply chain Management of food	Mr. Shankaran, Frigoscan, Chennai, India
11.00 to 12.00	Cold chain management of food	Mr. Shankaran, Frigoscan, Chennai, India
12:00	<i>High Tea</i>	
12.30 to 13.30	Cold chain management of food	Mr. Shankaran, Frigoscan, Chennai, India
13:30	<i>Lunch Break</i>	
14:30 to 15:30	Food Regulations-Highlights	Dr. H. Prathap Kumar Shetty

15:30	<i>High Tea</i>	
15:45 to 17:00	Food Regulations- Highlights	Dr. H. Prathap Kumar Shetty
17:00	Day Adjourns	
<b>Day 11 -27 April 2018</b>		
10:00 to 11:00	Bulk Storage of cereals, pulses and oil seeds	Dr Meenakshi, IIFPT, Thanjavur
11.00 to 12.00	Meat, poultry and seafood processing	Dr Ashish Rawson, IIFPT, Thanjavur
12:00	<i>High Tea</i>	
12.30 to 13.30	Food safety and Microbial assement	Dr. Vidhyalakshmi, IIFPT, Thanjavur
13:30	<i>Lunch Break</i>	
14:30 to 15:30	Food processing byproducts utilization and waste management	Dr Akash Pare, IIFPT, Thanjavur
15:30	<i>High Tea</i>	
15:45 to 17:00	Extrusion technology	Dr Durgadevi, IIFPT, Thanjavur
17:00	Day Adjourns	
<b>Day 12 -28 April 2018</b>		
10:00 to 12:00	Industrial visit	Er. Tito Anand, IIFPT, Thanjavur, India
<i>Lunch</i>		
15.00 to 18.00	Thanjavur Tour (Archeological important places)	Mr Siraj and Ms Harshini, IIFPT, Thanjavur, India
<b>Day 13 -29 April 2018</b>		
Sunday		
<b>Day 14 -30 April 2018</b>		
10:00 to 11:00	Agro marketing intelligence in marketing of agricultural products	Mr Selvam, Executive Director, Agribusines and Marketing, TN
11.00 to 12.00	Packaging and labeling	Dr Anand Kumar, IIFPT, Thanjavur
12:00	<i>High Tea</i>	
12.30 to 13.30	Back at home work plan presentation	Dr N Venkatachalapathy, IIFPT, Thanjavur
13:30	<i>Lunch Break</i>	
14:30 to 15:30	Basics of Food microbiology and applications in food processing and Food quality analysis	Dr Suresh Kumar, IIFPT, Thanjavur

15:30	<i>High Tea</i>	
15:45 to 17:00	Back to work Plan presentation and Post training test	Dr N Venkatachalapathy, IIFPT, Thanjavur
17:00	Day Adjourns	
<b>Day 15 -1 May 2018</b>		
10:00 to 11:30	Valedictory Function	
11:30	<i>High Tea</i>	
12.30 noon	<i>Lunch Break</i>	
13:30	Departure to Native country	

## 5.1 Technical lecture and demonstration sessions.

### 17<sup>th</sup> April 2018

Registration for the training program was conducted in the IIFPT campus which includes copies of passports, visa, health / insurance card and copies were collected for the record and reimbursement purposes. Introduction to IIFPT was presented by Dr.N.Venkatachalapathy and the participants were taken for a tour of IIFPT facilities engaged by Er.CK Sunil and Dr.N.Venkatachalapathy. Pre-test for the participants were conducted by Dr.Amudhasurabi.

### 18<sup>th</sup> April 2018

The after session was taken by Dr.V.Sriraman, Associate Professor, Bharathidasan Institute of Management (BIM) Trichy on “**Entrepreneurism in Food Processing**”. The lecture was on what it takes to be an entrepreneur, characteristics of an entrepreneur, planning to be an entrepreneur, growth pressure and corporate intrapreneurship and the competencies for entrepreneurship.

### 19<sup>th</sup> April 2018

Er.Sunil CK delivered a lecture on “**Unit operations in food processing**”. He elaborated on the processing steps from raw material purchase to finished product. The steps included materials handling, cleaning, grading and sorting, disintegrating/size reduction/milling, separations, pumping, mixing, heat transfer, evaporation, drying, forming and storage.



The forenoon lecture was delivered by Dr Yadav B K on “**Drying Technologies**”. He explained the basics of drying principle, mechanism and the factors affecting drying process. The selection criteria for dryer were discussed along with classification of drying techniques. The mode of heat input for drying and different types of dryers available were also explained. Followed by the theory class, Demonstration of the various drying equipment, like IR drying, solar dryer, Spray dryer etc was given to the participants for better understanding of the principle behind different dryers.



The afternoon session was handled by Dr Chindanand D V and the lecture was on “**Processing of fruits and vegetables**”. The processing technology available for fruits and vegetables were explained.



**20<sup>th</sup> April 2018**

The morning session started with the lecture on **“Processing of cereals, pulses and millets”** by Dr.Sulochana. The nutritive value, health benefits, processing steps and their effect on grain quality was discussed. The post harvesting technologies for the milled and the pre-processing steps for cereals, pulses and millets were explained. Various products developed from the cereals, millets and pulses and their value addition process was talked about in the lecture. The preparation recipes were also given to the participants to try on their own. Followed by theoretical session, hands-on training was given on processing of cereals, pulses and millets. Various types of millets, cereals and pulses popular in India were displayed for the participants to have a look and also “Pongal” was prepared in the lab and the process of making was observed by the participants.



The afternoon session lecture was delivered by Dr Jeyan Authur Moses on **“Processing of spices and plantation crops”**. Terminologies, Economic importance, Classification of species, harvesting methodologies of turmeric, pepper, cardamom were discussed along with processing procedures. Processing of chilli's and coconut oil was also discussed.



Followed by the lecture, the participants were given demonstration and hands-on training on processing of spices and plantation crops. The spices and few plantation crops were displayed on the table for the participants to identify. The equipment used for processing the spices and plantation crops were demonstrated to the participants better their better understanding on the principle lying behind the working principle of the equipment.



### 23<sup>rd</sup> April 2018

The morning session lecture was on “**Processing of rice and by products utilization**” delivered by Er.Tito Anand. He started the lecture talking about the physical and chemical characteristics of rice and dealt with various technologies available for the milling of paddy in the market. He also explained about the steps involved in the milling process like pre cleaning, dehushing, paddy separation, whitening or polishing, grading of rice and weighing of rice. The participants were taken to the modern rice mill in IIFPT and the demonstration of milling of rice was shown. The processing of puffed rice and millets were also demonstrated.



The forenoon session lecture was on “**Nondestructive quality evaluation methods**” delivered by Er.Sunil CK. The nondestructive methods like Imaging, Acoustic waves and chemical reaction based (E-nose and biosensors) were explained with their need in the industries. Imaging techniques like hyperspectral imaging, thermal imaging, X-rays and soft X-ray techniques were discussed with their application. The principle behind acoustic system and E-nose were also discussed with their application in industries.



The afternoon session lecture was delivered by Dr Akash Pare on “**Processing of oil seeds and soybeans and value addition**”. History of soybean usage, its country of origin, production and productivity status in India and world were explained. Insights on soybean processing, soybean oil extraction, soybean snack foods, soybean flour and various product developments were given to the participants. Utilization of byproducts from soy processing and the future strategy of soybean processing and utilization were discussed.



Followed by the class, the participants were taken to the incubation centre to gain hands-on training on processing of oil seeds and soybean and value addition. The soybean plant working principle was explained and the demonstration of producing soybean milk from soybean was done. Tofu preparation was also demonstrated to the participants for their better understanding. Tofu is a high protein food product obtained from soybean milk.



**24<sup>th</sup> April 2018**

The morning session lecture was presented by Dr. Mahendran R, on “**Non thermal preservation techniques for food products**”. The importance to ensure safety, increase shelf life of the product, increase digestibility and value addition was discussed. Thermal processing steps, emerging non thermal techniques were also explained. High pressure treatment, ultrasound treatment, High intensity pulsed electric field treatment and plasma treatment of Agricultural product were also discussed. After the lecture, the participants were taken to the Non-destructive quality measurement lab for the demonstration of non-destructive processing equipment like image processing and soft X-ray machine.



The forenoon session was on “**Bakery and Confectionary technologies**” demonstrated by Dr Hema V. Soft candy, hard candy, lollipop, sugar candy; caramel milk chocolate preparation was demonstrated to the participants. Preparation of caramelized puffed millet and chocolate chips were also demonstrated. Bakery unit with the use of each machine employed were explained to the participants.





The afternoon session talk was delivered by Dr Sinija VR on “**Processing of Milk and Milk Products**”. The nutritional compositions of raw milk, properties of the main structural elements of milk, milk processing steps were explained. Processing and production of various milk products like flavored milk, condensed milk, dried milk powder, cream, butter; ghee, ice cream, cheese etc were briefed in this lecture. Followed by the lecture, the participants were taken to the incubation center where there was a demonstration made on the making of paneer from milk for the participants. Hands-on training on processing of milk and milk products was given to the participants.



## 25<sup>th</sup> April 2018

The morning session lecture was delivered by Dr.G.Muralikrishna, Chief scientist (retd), former HOD, Department of Biochemistry, CSIR-CFTRI; Mysore on “**Biomolecules**”. The lecture gave insights about the classification of biomolecules and major complex biomolecules of the cell. The major biomolecules such as carbohydrates, lipids, proteins, enzymes and nucleic acids were discussed in detail for the participants to understand the basic biochemistry lying behind their structures.



The second session for the day was presented by Dr.A.Amudhasurabi on **“Intellectual property rights in Food Trade”**. The needs for intellectual property rights were explained. The importances of patent, copyrights, and trademarks were discussed. The procedure for filing patent and validity period of the patents was also discussed. Information on International Intellectual property rights were also shared with the participants



The last session of the day was on “**Hands-on training in Food Quality Analysis**” handed by Dr.Bhuvana. The participants were taken to the NABL accredited Food quality testing laboratory to learn about various sophisticated instruments like HPLC, FTIR spectroscopy etc. Chemical tests were carried out to the participants for detecting the adulteration in food samples. The participants were taken to the Mobile processing unit in IIFPT where there was a display of pure sample and the duplicate ones. Various simple tests were taught to the participants on differentiating the pure food product from the duplicate.



## 26<sup>th</sup> April 2018

The morning session lecture was delivered by Mr.Shankaran from Frigoscan, Chennai on “**supply chain management of food**”. The need for value addition in Agri-Sector, National Agri scenario, Opportunities in Agriculture and Agro based Industry were discussed. Principle links in Agricultural supply chains and Cold chain management were also discussed. Various product development strategies were explained to the participants that may help them in their future endeavors.





The afternoon session was on “**Food regulation in India**” delivered by Dr.Prathap kumar Shetty.H, Professor and head, Department of Food Science and Technology, Pondicherry University. The talk was about food safety and global food safety issues and challenges faced. Food safety and standard acts, its scope and objectives were discussed with the participants. The regulations and standard development process were explained. Proprietary food, Food product standards, Contaminants, toxins and pesticides in food was also discussed with the participants. The necessary information needed for licensing and registration of food business was given in this lecture.



**27<sup>th</sup> April 2018**

The morning session lecture was on **“Bulk storage of cereals, pulses and oil seeds”** presented by Dr.Meenakshi. Criteria for the selection of storage system, requirements for good storage structures, existing bulk storage methods were discussed. Silo, silo bags, cocoon storage and bunker storage were discussed in detail. The packing materials were shown to the participants as well.



The next lecture was on **“Meat, Poultry and Seafood Processing”** delivered by Dr.Ashish Rawson. The nutritional value of meat, both beef and pork were explained. Classification of meat was explained in detail such as fresh processed meat products, dried meat, raw cooked products etc. Nutritional value of poultry meat, poultry storage was also mentioned in the lecture. Fish and shell fish processing was discussed. High pressure processing technology was explained which is widely used in meat industry.



The last forenoon session was presented by Dr.Vidhyalakshmi on **“Food Safety and Microbial Assessment”**. General objectives of food safety program, risk factors involved in safety of food were discussed. The seven principles of HACCP were explained followed by the physical, chemical and biological food safety hazards. The basic methods like standard plate counts, dye reduction techniques etc were discussed which are used to determine the number of cells present in the food substances.



The first lecture in the afternoon session was on **“Food processing byproducts utilization and waste management”** by Dr. Akash Pare. Food wastage and total food waste disposed globally was discussed where 47% of the food wastage disposal is from the residential. Cereal waste utilization, potato waste utilization, protein recovery and its utilization is case of potato waste, bioethanol production from waste potato were discussed. Various techniques used to utilize waste from milk, Fish, coconut were also explained. Sugarcane waste utilization, its co-generation system and ethanol production from bagasse were discussed.



The last lecture of the afternoon session was on **“Extrusion technology”** delivered by Dr. Durgadevi. History behind the extrusion process, classification of extrusion, extrusion machine, parts of extruder, effect of extrusion on product quality was discussed. Production and processing of millet noodles was demonstrated in the incubation center for the participants.



### 30<sup>th</sup> April 2018

The morning session lecture was delivered by Dr.Selvam, Executive Director, Agri business and marketing, Tamil Nadu on “**Agro marketing Intelligence in Marketing of Agricultural products**”. Depending on the demography of the location, the scopes of marketing as well as the demand assessment of agricultural products were discussed.



The forenoon session lecture was delivered by Dr. Anand kumar on “**Packaging and labelling**”. Broad classifications on the packaging system were detailed in this lecture. Shipping containers usage was elaborated and the package materials and their types such as low density polyethylene, high density polyethylene, polyethylene terephthalate etc were discussed.





The afternoon session talk was delivered by Dr.Suresh kumar on “**Basics of Food microbiology and applications in food processing and Food quality analysis**”. Microorganisms in food and beverage production were explained to the participants. Probiotic usage and advantages were discussed. Insights on Food preservation techniques and microorganism involved in food spoilage were given to the participants.



## Back at work Plan

Back at work plan was presented by the participants to Dr.N.Venkatachalapathy. Post-test, for the participants, was conducted by Dr.Amudhasurabi.



## 5.2 Field Visit

21<sup>st</sup> April 2018

The participants were taken to Nagapattinam to visit the Tamil Nadu fisheries university. Dr. Brahma explained the basic techniques used for processing of fish and he detailed on each step involved. The session was more like a discussion between the participants and Dr. Brahma. Dr. Brahma also demonstrated the process of making fish noodles with the entrepreneurs who learn the techniques from the TNFU. The participants enjoyed the session and it was new to them and also they were exposed to various products made out of fish. The participants eagerly purchased fish pickles, biscuits and dried products.





The participants were taken to Dr.MGR Fishery College and Research institute where they were explained about the research going on and they were shown the **aquarium** within the campus.



**28<sup>th</sup> April 2018**

The participants were taken to the local fresh water fishery pond where fishing techniques, maintenance condition for the better growth of the fish were explained.



The participants were taken to the cashew nut processing plant, where each and every step involved in the process was explained clearly. From the raw material purchase to export of the finished cashew product were discussed.





### **5.3 Visit to places of Historical and Cultural importance**

After the lunch, the participants were taken to Velankanni “Basilica of our lady of good health” church and were explained about the history of the place. They also enjoyed the beach and did shopping in the local markets.





The participants were also taken to the Museum and Big temple in Thanjavur where they explored the rich heritage and history of Thanjavur.



#### 5.4 Cultural Evening

Cultural night was organized by the IIFPT team in Hotel Sangam, where Tamil Nadu's traditional Bharathanatyam was performed by classical dancers. The participants enthusiastically staged their respective traditional dance and there was a cultural exchange between the participants of different country and the IIFPT family members.







## 6. Training evaluation

### 6.1 Evaluation of training session

Feedback of all Executives was collected on all training sessions including theory, panel discussion and practical sessions conducted by different resource persons and study visits on rating on the 1-10 scale (1 being the least and 10 being highest) i.e. '1 being the least and 10 being the highest. Their suggestions on other areas such as Food and accommodation, transport facilities provided and overall impression about the training were also collected for improvement in future program of similar kind. Executives rated the overall training program with a score of 9.3 on 10 point scale.

SI.No	Sessions taken by faculty	Average score (Out of 10)
1	Introduction- Food processing sector, present scenario.	9.31
2	Entrepreneurship in food processing- Importance, Drivers and Challenges	9.36
3	Unit operations in food Processing & Non destructive quality Evaluation methods	9.00
4	Drying Technologies & Demonstration and hands on training of Drying Technologies	9.00
5	Processing of cereals, pulses and millets. & Hands-on training on Processing of cereals, pulses and millets. Value addition of cereals, pulses and millets	9.10
6	Processing of spices and plantation crops & Demonstration and Hands-on training on Processing of spices and plantation crops	9.68
7	Processing of Rice and byproducts utilization & Demonstration and Hand-on training on processing of Rice	9.05
8	Processing of Oil seeds and soybean and value addition & Demonstration and hands-on training of Processing of Oil seeds and soybean and value addition Food processing byproducts utilization and waste management	9.00
9	Non thermal processing of foods & Demonstration and hands-on training of Non thermal processing of foods	8.94
10	Bakery and confectionary technologies – Demonstration	8.89
11	Processing of Milk and milk products & Hands-on training on Processing of Milk and milk products	9.05

12	Basics of food and nutrition	8.73
13	Basics of Food microbiology and applications in food processing and Food quality analysis	9.26
14	Hands-on training on Food Quality analysis	8.94
15	Supply chain Management of food & Cold chain management of food	9.52
16	Bulk storage of cereals, pulses and oil seeds	9.10
17	Food Regulations-Highlights	9.26
18	Meat, poultry and seafood processing	8.73
19	Food safety and Microbial assesement	9.21
20	Extrusion technology	9.00
21	Processing of fruits and Vegetables	9.10
22	Packaging and labeling & Hands on training on Packaging and Labeling of spices, bakery products and RTE products	9.10
23	IPR (Intellectual Property Rights) in Food Trade	9.10
24	Agro marketing intelligence in marketing of agricultural products	9.36
25	Food & Accommodation	9.42
26	Transport facility	9.21
27	Overall impression about training program	9.31

## 6.2 Pre and Post Training Session

Pre & Post training tests were conducted for the Executives at the beginning and at the end of the training, respectively. Twenty five objective questions on Post-Harvest Technology in Horticultural Crops with a maximum of 25 marks were administered for pre- and post-training tests and the responses obtained were evaluated to assess the change in knowledge levels and effectiveness of the training program. The average score of executives in the pre-training test as 4.3/10 whereas the average score of post-training was 7.17/10. Thus, level of knowledge of executives increased by 29 per cent after the training program.

<b>Sl.No</b>	<b>NAME OF THE EXECUTIVES</b>	<b>PRE TEST SCORES (OUT OF 10)</b>	<b>POST TEST SCORES (OUT OF 10)</b>	<b>GAIN SCORE (POST- PRE SCORES)</b>	<b>GAIN PERCENTAGE</b>
1	Dr. Wanjohi Cathryn Wanjiru	6	8.5	2.5	25
2	Mr. Nyakiti Gordon Ochieng	8	8.5	0.5	65
3	Mr. Wanjohi Bernard Kiregi	6	8	2	20
4	Ms. Wasike Cynthia Naliaka	6	7	1	10
5	Ms. Thome Alice Mumbi	5	8.5	3.5	35
6	Mr. Varney, Emmis Fallah	3	7.5	4.5	45
7	Ms. Mwase Ethel	4	6	2	20
8	Mr. Chuma Madalitso	5	6	1	10
9	Mr. Makoka Yamikani Francis	3	4	1	10
10	Ms. Kumwembe Annie	3	7	4	40
11	Ms. Chilaule Catia Pery	3	7	4	40
12	Mr. Chicuate Noe Carlos Francisco	3	6.5	3.5	35
13	Mr. Banze Lourenco Fernando	3	4.5	1.5	15
14	Dr. Hitalar San	5	6.5	1.5	15
15	Dr. Su Sandi	4	5.5	1.5	15
16	Ms. Ateng Santa	3	9	6	60
17	Mr. Bilungi Dennis	4	8.5	4.5	45
18	Mr. Muwadi John	4	8.5	4.5	45
19	Mr. Nuwasiima Saverino	4	8.5	4.5	45
20	Mr. Otunga Anthony	5	8	3	30

### **6.3 Post Training Monitoring**

Post-training impact evaluation in respective countries by Program Coordinator of Host Institute is an integral part of the program. Program Coordinator will be regularly in touch with executives through emails to monitor the progress of their “Back-at Work-Plans” and it will help in the effective monitoring and impact evaluation which is one of the important aspects of Program Monitoring & Evaluation (M & E).

### **6.4 Back at Work Plan**

The back at home work plan forms were filled by the participants and it was collected. (Attached in annexure I)

## **7. Valedictory Session**

### **1<sup>st</sup> May 2018 - Valedictory function**

The chief guest for the valedictory function was Dr.Bhimaraya Metri, Director, IIM, Trichy. He was honored by Dr.C.Anandharamakrishnan, The Director, IIFPT. The guest lecture was given by Dr.Bhimaraya Metri where he mentioned Thanjavur as the land of intellectuals and encouraged the participants to make a difference in their community with learning from the training program. The certificates and mementos were distributed to the participants by the chief guest and the Director, IIFPT in the presence of IIFPT students, Staffs and faculty. One participant from each country came upon to the stage to express their gratitude to IIFPT family and MANAGE Hyderabad and assured to bring out the change their life and the people around them with their acquired knowledge from the training program.













## FEEDBACK ON THE TRAINING







## BACK AT WORK PLAN - TASK

You have received valuable inputs from experts at IIFPT and during field visits on various aspects of Plant protection. Please prioritize one important activity to be taken up by you when you returns back to your workplace. Care has to be taken to decide the activity which can be delivered smoothly in your official responsibility without seeking additional funds, manpower and other facilities.

Prepare the Back at Work Plan for one most important activity in the following format.

**I. Name of the Activity:** TRAINING FARMERS/YOUTH GROUPS IN FRUIT PROCESSING AND VALUE ADDITION TECHNOLOGIES - BANANA VALUE CHAIN

1. Problem in your service area:
  - 1.1- SEASONAL PRODUCE ABUNDANCE RESULTING IN MARKET OVERSUPPLY AND CONSEQUENTIAL LOW PRICES
  - 1.2- SIGNIFICANT PRODUCE LOSS DUE TO PERISHABILITY
  - 1.3- LIMITED MARKET COVERAGE SCOPE IN PRODUCE PRIMARY FORM
2. Indian Experiences / Solutions/ Innovations:
  - 2.1- DRYING TECHNOLOGY - SOLAR DRYER PRINCIPLES
  - 2.2- FRUIT PROCESSING TECHNOLOGIES
  - 2.3- MARKET APPEALING PACKAGING AND LABELLING TECHNIQUES
  - 2.4- SUITABLE PACKAGING MATERIALS FOR UPCOMING RURAL PRODUCE PROCESSING ENTREPRENEURS
3. Place:

KIRINYANGA AND NYERI COUNTIES
4. Target group:
  - 4.1- INDIVIDUAL FARMERS
  - 4.2- FARMER GROUPS
  - 4.3- WOMEN GROUPS
  - 4.4- YOUTH GROUPS
5. Duration:

SIX MONTHS - MAY - OCTOBER 2012
6. Expected end results:
  - 6.1- 30 BENEFICIARIES TRAINED
  - 6.2- 50% REDUCTION IN BANANA FRUITS WASTAGE
  - 6.3- INCREASED INCOME FROM SALE OF PROCESSED & VALUE ADDED PRODUCT
  - 6.4- INCREASED ACCESS TO WIDER MARKET NICHE FOR PROCESSED PRODUCTS
  - 6.5- ENTREPRENEURSHIP OPPORTUNITIES FOR RURAL YOUTHS
7. Any other information:

DURING IMPLEMENTATION OF BAWP MORE ACHIEVEMENTS ARE EXPECTED TO BE MADE TO ENSURE THAT TARGET BENEFICIARIES REAP MAXIMALLY ALONG THE ENTIRE VALUE CHAIN. TO THIS END, TRAINING IN ENTERPRISE RECORD KEEPING, GROSS MARGIN ANALYSIS (GMA) AND THREE PRINCIPLES OF AGRO MARKETING INTELLIGENCE I.E (PRODUCT, PLACE & PRICE) WILL BE DONE TO INCREASE SALE OF PROCESSED PRODUCTS.

Name: GORDON NYAKITI

Signature 

## BACK AT WORK PLAN - TASK

You have received valuable inputs from experts at IIFPT and during field visits on various aspects of Plant protection. Please prioritize one important activity to be taken up by you when you returns back to your workplace. Care has to be taken to decide the activity which can be delivered smoothly in your official responsibility without seeking additional funds, manpower and other facilities.

Prepare the Back at Work Plan for one most important activity in the following format.

**I. Name of the Activity:** PROCESSING & Value addition of fruits and Vegetables.  
(Tomatoes, Mango & Bananas)

1. Problem in your service area:

- Seasonal Overproduction of fruits & Vegetables/post harvest losses.
- Low price returns.
- perishability of produce.
- Low Value addition technology skills base.

2. Indian Experiences / Solutions/ Innovations:

- Drying technologies - Solar driers
- Fruits & Vegetable processing technologies.
- packaging & labelling techniques.

3. Place: - Kirinyaga County. - Muranga County.  
- Nyeri County.  
- Kiambu County

4. Target group:

- Individual farmers.
- Youth and women groups.

5. Duration: June 2018 onwards.  
Each training module/package will take 5 days.

6. Expected end results:

- 100 farmers and youths trained on fruits and vegetable processing.
- 50% reduction in post harvest losses
- Increased return from sale of produce.

7. Any other information:

- During the implementation of BAWIP other topics such as Record Keeping, Gross Margin Analysis (GMA) and HIV/AIDS Gender

Name: Alice Thome

Signature 

KENYA SCHOOL OF AGRICULTURE

KENYA.

## BACK AT WORK PLAN - TASK

You have received valuable inputs from experts at IIFPT and during field visits on various aspects of Plant protection. Please prioritize one important activity to be taken up by you when you returns back to your workplace. Care has to be taken to decide the activity which can be delivered smoothly in your official responsibility without seeking additional funds, manpower and other facilities.

Prepare the Back at Work Plan for one most important activity in the following format.

### I. Name of the Activity: VALUE ADDITION OF MANGOES

1. Problem in your service area:

In one of the Counties where we are working, with farmers, during the mango season the quality of mangoes available for sale increases rapidly. The result is that farmers get low prices and many fruits get spoilt.

2. Indian Experiences / Solutions/ Innovations:

I have learnt of dehydration as a process for value addition in fruits and vegetables. I wish to train farmers on dehydration of mangoes to reduce spoilage and increase income from mangoes.

3. Place:

Tharaka Nithi County, Tharaka South sub-county in Rungu Irrigation scheme.

4. Target group:

Mango growing farmers

5. Duration:

July to September as mangoes begin flowering

6. Expected end results:

farmers will have better prices for their mangoes and hence higher incomes

7. Any other information:

The activity may not require much funding because it would be combined with the training already planned/budgeted in the 2018/19 work plan and budget.

Name:

WANJOHI BERNARD KIRESI  
KENYA

Signature



## BACK AT WORK PLAN - TASK

You have received valuable inputs from experts at IIFPT and during field visits on various aspects of Plant protection. Please prioritize one important activity to be taken up by you when you returns back to your workplace. Care has to be taken to decide the activity which can be delivered smoothly in your official responsibility without seeking additional funds, manpower and other facilities.

Prepare the Back at Work Plan for one most important activity in the following format.

### I. Name of the Activity: SENSITIZATION OF STAKEHOLDERS ON USE OF WASTE PRODUCTS IN MEAT PROCESSING

1. Problem in your service area: a) At the abattoir, there is a lot of loss of waste products in the form of intestinal contents, blood, trimmings, parts of the carcass and dung etc.  
(b) Environmental pollution due to poor disposal of the waste products  
(c) Public health hazards due to poor disposal
2. Indian Experiences / Solutions/ Innovations:  
(a) Collection of waste products in drums or containers. Both liquid & solid waste products.  
(b) Boil the waste products in big rotating drums  
(c) Mix into a slurry  
(d) Dry using drum drying method  
(e) Samples are tested for quantities of ingredients for animal feed & fertilizers  
(f) The product is sold to feed & fertilizer manufacturers.
3. Place: The sensitisation will be held at the Meat Training Institute (MTI)
4. Target group: Representatives of abattoir staff, extension staff, MTI staff, meat processors, animal feed manufacturers, fertilizer manufacturers
5. Duration: 6 months.  
1<sup>st</sup> month - identify representatives of the different groups.  
By 3<sup>rd</sup> month - sensitization meetings of different related groups will be held  
6<sup>th</sup> month - meeting of all representatives of stakeholders to see how to link together and support each other.
6. Expected end results:  
(a) Wastage of waste products reduced.  
(b) Entrepreneurs come up.  
(c) Reduced environmental pollution  
(d) Reduced public health hazards. Public health standards maintained
7. Any other information:
  - There are 3 categories of abattoirs - Export abattoirs, local abattoirs and slaughter slabs.
  - The law in Kenya prohibits slaughter of livestock in premises other than slaughterhouses
  - Core product of slaughter is meat.

Name: Dr. Cathryn Wanjiru Wanjishi

Signature 



## BACK AT WORK PLAN - TASK

You have received valuable inputs from experts at IIFPT and during field visits on various aspects of Plant protection. Please prioritize one important activity to be taken up by you when you returns back to your workplace. Care has to be taken to decide the activity which can be delivered smoothly in your official responsibility without seeking additional funds, manpower and other facilities.

Prepare the Back at Work Plan for one most important activity in the following format.

### I. Name of the Activity:

Training Farmer Groups in fruit & vegetable processing  
(Banana, Tomato & Mango value chain)

1. Problem in your service area:
  - i) Seasonal produce abundance leading to market supply hence low price returns
  - ii) Produce is highly perishable.
  - iii) Limited Market coverage scope in primary form.
2. Indian Experiences / Solutions/ Innovations:
  - i) Drying technologies - solar dryer
  - ii) Fruits & vegetables processing technologies.
3. Place:

Kirinyaga, Nyeri, Kiambu & Murang'a counties.
4. Target group:
  - Individual Farmers.
  - Farmer Groups
  - Women Groups
  - Youth Groups
5. Duration:

June - December.
6. Expected end results:
  - i) Increased income to farmers from sale of processed products
  - ii) 50% reduction in primary produce wastage
  - iii) Create entrepreneurship among the youth.
7. Any other information:

- During the implementation of BAWP more achievements are expected to be made to ensure that target farmers/youth are involved in agriculture to get maximum benefit from this value chain.

Name:

Wasike Cynthia  
Nakuka

Signature

Cynthia

## BACK AT WORK PLAN - TASK

You have received valuable inputs from experts at IIFPT and during field visits on various aspects of Plant protection. Please prioritize one important activity to be taken up by you when you returns back to your workplace. Care has to be taken to decide the activity which can be delivered smoothly in your official responsibility without seeking additional funds, manpower and other facilities.

Prepare the Back at Work Plan for one most important activity in the following format.

**I. Name of the Activity:** ~~Build~~ Building of Smallholder Farmers Capacity by training through extension.

1. Problem in your service area: \* Technologies are lacking, \* Smallholder farmers have no first hand training on handling, preservation, storage and processing of fruit crops in Liberia.
2. Indian Experiences / Solutions/ Innovations: India has a bad experience at the beginning but was able to overcome it by the Government involvement by providing subsidies and grants to institutions and industries. provide storage facilities for the smallholder farmers.
3. Place: Kingville & Margibi
4. Target group: Smallholders farmers, most especially women & youth. I will Targeting 250 person
5. Duration: 6 month
6. Expected end results: \* Smallholder farmers will gain knowledge on the handling, preservation Storage and processing of fruit & vegetables
7. Any other information: With the economic crisis in my country, we are going seek the Government attention to use the same methods use by India to overcome their problem.

Name: Emmis F. Varney

Signature



April 30, 2018

## Back at Work Plan

- ① Name of Activity: Building the capacity of the smallholders farmers of my institution on food processing through training by extensions services on the farmers farm. Finding mini processing machinery that we can start with training of our farmers.
- ② Indian Experience: Indian experience ~~at~~ lot of lost on food products across India years back. 80% of the fruit and vegetable products got damaged during and after harvest.

Solution: Establishing of an Institution that ~~trained~~ provides training for farmers on post harvest losses, storage, preservation and processing of food. Also Government involvement by providing subsidies and grants to develop integrated cold chains, mega food parks, modern terminals markets and bulk storage facilities as well as modernization of markets quality control laboratories and etc.

Innovation: Those Industries and Institutions created ~~an~~ Ideas of producing Technologies for the processing of food. By this, the Indian food processing industry became increasing its contribution to the world food trade by growing step-by-step every year.


③ Place: Kingsville, Montserrado County, Liberia

④ Target group: Smallholder farmers and the outgrowing of ~~my~~ Institution.  
Farmers Empowerment and Extension Delievably (FEED). <sup>will</sup> Target ~~the~~  
About 250 farmers in the first cycle.

⑤ Duration: SIX MONTHS Page 1

⑥ Expected end results: At the end of the period under review, I expect the targeted farmers are trained in the processing of food.  
⇒ That the targeted farmers will understand the need to work as cooperative which will ~~not~~ enable them generate money from their products for sustainability of their homes.

- ⇒ That at the near future Liberians ~~can~~ be like Indians in the processing of food products.
- ⇒ That I will <sup>be</sup> one of the Liberians leading processor of chily pepper and tomato products.

Emmis Fallah Varney 

# Implementation Work Plan

Activity	Start Date	End Date	Targeted group	# person	Duration	Expectation
Post harvest losses	June 5, 2018	June 25, 2018	Smallholder Farmers 140 men & youth	250	20 days	That the farmers will understand the how to handle their crop during harvest
Preservation \$	June 30, 2018	July 29, 2018	Smallholder Farmers 140 men & youth	250	25 day	Storage facilities will be identify and farmers will understand how to store & preserve
Value Addition on vegetable	August 10, 2018	August 30, 2018	✓ ✓	✓ ✓	20 days	Farmers will understand how add value to their products. for profit
Storage & handling	September 10, 2018	September 25, 2018	✓ ✓	✓ ✓	15 days	The farmers will understand & trained on how stand & trained on how to handle & store their products for better market value
Processing of Fruits & Tomatoes & Chilly peppers	October 10, 2018	November 15, 2018	✓ ✓	✓ ✓	35 days	Farmers are trained on the processing of the Tomatoes and Chilly peppers at market value.
Marketing of products.	November 20, 2018	Dec 15, 2018	✓ ✓	✓ ✓	15 days	Products will be available on the market.

## BACK AT WORK PLAN - TASK

You have received valuable inputs from experts at IIFPT and during field visits on various aspects of Plant protection. Please prioritize one important activity to be taken up by you when you returns back to your workplace. Care has to be taken to decide the activity which can be delivered smoothly in your official responsibility without seeking additional funds, manpower and other facilities.

Prepare the Back at Work Plan for one most important activity in the following format.

### I. Name of the Activity:

*Production of broiler chicken*

1. Problem in your service area:

*Processing of chickens for the market.*

2. Indian Experiences / Solutions/ Innovations:

*I learned that processing products gives more values to the products and also make it safe to use during long time. Avoids losses after harvest.*

3. Place: *Kamavota - Napeto - Mozambique*

4. Target group: *15 farmers who are operating at this sector (at) in Kamavota district.*

5. Duration: *1 year*

6. Expected end results: *Gives more income to the farmers.*

7. Any other information: *The implementation of food processing technologies in Mozambique is not common in many rural areas for several areas currently. The first reason is related to the lack of knowledge of the technologies, the second and by faulty availability of equipment for this purpose.*

Name:

*Noé Chicuate*

Signature

*Noé Chicuate*  
*27/04/2018*

7.

(Continue)

- But the government is aware of this challenge but to change the scenario needs some time.

One of the action is our existences in this training program here.....



## BACK AT WORK PLAN - TASK

You have received valuable inputs from experts at IIFPT and during field visits on various aspects of Plant protection. Please prioritize one important activity to be taken up by you when you returns back to your workplace. Care has to be taken to decide the activity which can be delivered smoothly in your official responsibility without seeking additional funds, manpower and other facilities.

Prepare the Back at Work Plan for one most important activity in the following format.

### I. Name of the Activity:

Horticulture Production

1. Problem in your service area:  
Processing of lettuce
2. Indian Experiences / Solutions/ Innovations:  
Processing Products gives more values to the products and also make it safe to use during long time
3. Place: Mozambique - Maputo - city
4. Target group: Transfer the experience of 43 lettuce Producers.
5. Duration: 6 month
6. Expected end results: Increase the income of producers
7. Any other information: The implementation of food processing technologies is not common in many rural areas for several reasons, the first is related to the lack of knowledge of technologies, the second and by faulty availability of equipment for this purpose. But the government is aware of this challenge but to change the scenario needs some time.

Name:

Cátia

Signature

Cátia Fery Chikule

## BACK AT WORK PLAN - TASK

You have received valuable inputs from experts at IIFPT and during field visits on various aspects of Plant protection. Please prioritize one important activity to be taken up by you when you returns back to your workplace. Care has to be taken to decide the activity which can be delivered smoothly in your official responsibility without seeking additional funds, manpower and other facilities.

Prepare the Back at Work Plan for one most important activity in the following format.

### I. Name of the Activity:

Horticulture production

1. Problem in your service area:

Processing of cabbage

2. Indian Experiences / Solutions/ Innovations:

Processing product gives more values to the products and also make it safe for quite long time.

3. Place:

Kallawata district - Maputo city

4. Target group:

Producers and sellers of cabbage  
20 productions.

5. Duration:

6 months

6. Expected end results:

To make know the importance of processing the cabbage in order to guarantee the population of food at all times at any time of the year.

7. Any other information:

The food processing program is good because it helps growers to cashed and increase their family incomes.

Name:

Lawrence Fernando Bunge

Signature



## BACK AT WORK PLAN - TASK

You have received valuable inputs from experts at IIFPT and during field visits on various aspects of Plant protection. Please prioritize one important activity to be taken up by you when you returns back to your workplace. Care has to be taken to decide the activity which can be delivered smoothly in your official responsibility without seeking additional funds, manpower and other facilities.

Prepare the Back at Work Plan for one most important activity in the following format.

### I. Name of the Activity:

Extension service for milk processing knowledge to villagers

1. Problem in your service area:
  - the knowledge of the advantages of milk is poor
  - milk consumption is low
2. Indian Experiences / Solutions/ Innovations:

Indian Experiences
3. Place: one village from Nay Pyi Taw
4. Target group:
  - villagers
5. Duration: June, 2018
6. Expected end results: milk consumption could be high
7. Any other information: In Myanmar,  
milk consumption -> 20 kg / person / year

Name: Su Sandi  
Myanmar

Signature

Su Sandi

## BACK AT WORK PLAN - TASK

You have received valuable inputs from experts at IIFPT and during field visits on various aspects of Plant protection. Please prioritize one important activity to be taken up by you when you returns back to your workplace. Care has to be taken to decide the activity which can be delivered smoothly in your official responsibility without seeking additional funds, manpower and other facilities.

Prepare the Back at Work Plan for one most important activity in the following format.

### I. Name of the Activity:

Extension service for milk processing knowledge to villagers

1. Problem in your service area:
  - the knowledge of the advantages of milk is poor
  - milk consumption is low
2. Indian Experiences / Solutions/ Innovations:

Indian Experiences
3. Place: one village from Nay Pyi Taw
4. Target group: villagers
5. Duration: June, 2018
6. Expected end results: Milk consumption could be high
7. Any other information: In Myanmar,  
Milk consumption → 20 kg/person/year

Name: Hitala San  
Myanmar

Signature 

## BACK AT WORK PLAN - TASK


You have received valuable inputs from experts at IIFPT and during field visits on various aspects of Plant protection. Please prioritize one important activity to be taken up by you when you returns back to your workplace. Care has to be taken to decide the activity which can be delivered smoothly in your official responsibility without seeking additional funds, manpower and other facilities.

Prepare the Back at Work Plan for one most important activity in the following format.

**I. Name of the Activity:** Rice Processing (~~Preparation~~ <sup>cleaning,</sup> Processing and Polishing)

1. Problem in your service area:  
- Farmers produce rice but sell without milling and grading
2. Indian Experiences / Solutions/ Innovations:  
There is proper rice processing grading and packaging in India
3. Place: Mkhotalakota District  
Central Malawi
4. Target group: Chibonthe farmer field school group  
19 women 11 men
5. Duration: June - November 2018 (3 months)
6. Expected end results: After processing the farmers will sell good quality rice and make more profits. This will improve income
7. Any other information:  
The other groups to adopt after the success of this group

Name: Ethel Mwase

Signature 

## BACK AT WORK PLAN - TASK

You have received valuable inputs from experts at IIFPT and during field visits on various aspects of Plant protection. Please prioritize one important activity to be taken up by you when you returns back to your workplace. Care has to be taken to decide the activity which can be delivered smoothly in your official responsibility without seeking additional funds, manpower and other facilities.

Prepare the Back at Work Plan for one most important activity in the following format.

### I. Name of the Activity: *soya bean processing*

1. Problem in your service area:  
*micro nutrient deficiencies*
2. Indian Experiences / Solutions/ Innovations:  
*soya bean processing and product development.*
3. Place: *Thandwe E.P.A, Zomba District, Malawi*
4. Target group: *30 women - farmers*
5. Duration: *June - November 2018 (six months)*
6. Expected end results: *families eating nutritive food values from soya bean.*
7. Any other information:  
*more women groups to adopt soya bean processing and utilization of its different products.*

Name: *Anne Kumbembe*

Signature *Akete*

## BACK AT WORK PLAN - TASK

You have received valuable inputs from experts at IIFPT and during field visits on various aspects of Plant protection. Please prioritize one important activity to be taken up by you when you returns back to your workplace. Care has to be taken to decide the activity which can be delivered smoothly in your official responsibility without seeking additional funds, manpower and other facilities.

Prepare the Back at Work Plan for one most important activity in the following format.

**I. Name of the Activity:** Orange Fleshed Sweet potato processing.

1. Problem in your service area: Micro Nutrients Deficiency.
2. Indian Experiences / Solutions/ Innovations: Food processing and product development.  
- Organise farmers to be in groups to sell the products at a good price.
3. Place: Will be done in Malawi Lilongwe District, that's Malingunde Extension Planning Area. Especially Namankani section.
4. Target group: Training the lead farmers.  
Male: 15. Female 15. total = 30
5. Duration: From June to December.
6. Expected end results: We are expecting the the farmers to process and dietary diversity the orange fleshed sweet potato hence generating more income and reducing malnutrition.
7. Any other information:  
- On my section, more farmers are growing the orange fleshed sweet potato.

Name:

YANKANI MAKOKA

Signature

## BACK AT WORK PLAN - TASK

You have received valuable inputs from experts at IIFPT and during field visits on various aspects of Plant protection. Please prioritize one important activity to be taken up by you when you returns back to your workplace. Care has to be taken to decide the activity which can be delivered smoothly in your official responsibility without seeking additional funds, manpower and other facilities.

Prepare the Back at Work Plan for one most important activity in the following format.

### I. Name of the Activity:

*None-Dairy Milk Production (Day milk)*

1. Problem in your service area:

*High buying cost of Dairy Milk*

2. Indian Experiences / Solutions/ Innovations:

*Milk processing from day bears*

3. Place:

*Kasungu District (working area)*

4. Target group: *women (30) and the beneficiaries will be children below the age of 5, specifically those on complementary feeding practices and lactose intolerant individuals of all age groups.*

5. Duration:

*July - December, 2018*

6. Expected end results:

*Improved nutritional status and high income gains realised from the sales*

7. Any other information:

Name:

*MASALINDO CHUMA*

Signature





## BACK AT WORK PLAN - TASK

You have received valuable inputs from experts at IIFPT and during field visits on various aspects of Plant protection. Please prioritize one important activity to be taken up by you when you returns back to your workplace. Care has to be taken to decide the activity which can be delivered smoothly in your official responsibility without seeking additional funds, manpower and other facilities. Prepare the Back at Work Plan for one most important activity in the following format.

### I. Name of the Activity:

Sensitization of rural women and youth farmers groups for Sustainable development initiatives in processing agricultural produce

1. Problem in your service area:  
~~Sensitization of rural women and youth farmers groups for Sustainable development initiatives in processing agricultural produce~~  
- Cereals, grains and pulses.  
• Poor storage practices of grains and cereals after harvest which often leads to high post harvest losses
2. Indian Experiences / Solutions/ Innovations:  
• use of mechanized & modern techniques of food processing used ( bench mark)  
• Clean & hygienic environment where food processing takes place
3. Place:  
Okarawok village  
AKOdebe  
Adwil
4. Target group:  
3 Women and youth farmer groups
5. Duration:  
6 weeks - May - October 2018
6. Expected end results:  
• 3 farmer groups Sensitized on merits of value addition for improved quality  
• 3 farmer groups adopting better storage of grains and cereals
7. Any other information:

Name: ATENG SANTA (Ms)

  
Signature

## BACK AT WORK PLAN - TASK

You have received valuable inputs from experts at IIFPT and during field visits on various aspects of Plant protection. Please prioritize one important activity to be taken up by you when you returns back to your workplace. Care has to be taken to decide the activity which can be delivered smoothly in your official responsibility without seeking additional funds, manpower and other facilities.

Prepare the Back at Work Plan for one most important activity in the following format.

### I. Name of the Activity:

- Improvement of hygiene in capture fish handling in Anolatar
1. Problem in your service area: *poor / unhygienic fish handling at the fishing villages in Anolatar District on lake Kyoga*
  2. Indian Experiences / Solutions/ Innovations: *Hygienic handling of food materials, food products development and value addition, good equipments for food handling*
  3. Place: *Six selected fishing villages in the district*
  4. Target group: *Boat owners, fishermen, fish traders, local processors and their leaders*
  5. Duration: *May - October 2018*
  6. Expected end results: *Hygienic handling of fresh fish and processing of fish at the landing sites and locally made fish handling facilities put in place*
  7. Any other information:

OTUNGA ANTHONY

Name:

UGANDA



Signature

T. +256-772-327369 754 327369  
e. otungarich@outlook.com

## BACK AT WORK PLAN - TASK

17

You have received valuable inputs from experts at IIFPT and during field visits on various aspects of Plant protection. Please prioritize one important activity to be taken up by you when you returns back to your workplace. Care has to be taken to decide the activity which can be delivered smoothly in your official responsibility without seeking additional funds, manpower and other facilities. Prepare the Back at Work Plan for one most important activity in the following format.

**I. Name of the Activity:**

→ Integrated Fish & mushroom value addition project

→ Wastages in fish and crop commodities and over dependence on the foreign enterprise. Many products are burnt/wasted or sold at a giveaway price.

1. **Problem in your service area:** Fish & fish wastes are over dependent on fish & have no alternative livelihood.

2. **Indian Experiences / Solutions/ Innovations:**

- Through lectures, hands on laboratory work, field visits, and one on one interaction with professors
- formation of cooperatives & unions to do contract farming group
- The use of waste like bean husk + other to do mushroom group & add value to eat by processing

3. **Place:**

- lake pulche
- Muringo Integrated Model School

4. **Target group:**

- school children & parents of the school
- fishers & fish mages
- farmers in villages riparian to water bodies

5. **Duration:**

6-12 months

6. **Expected end results:**

- Increased income
- Alternative livelihoods among the fish-folk communities
- Job creation
- Extra income through agro tourism

7. **Any other information:**

- clean & safe environment.
- there will be contact collaboration among participants
- India experts for consultations to enable the project achieve the intended results in the specified time frame

BHONGU SENANIS

**Name:**

BH  
**Signature**

This form is prepared

## BACK AT WORK PLAN - TASK

①

### I Name of the Activity:

Improving Mukene Fish handling, Processing, Packaging and Value Addition.

Mukene is a local name in Uganda, for a fresh water pelagic ray-finned Silver Cyprinid or Lake Victoria Sardine Rastrineobola argentea also known as Omene in Kenya and Daga in Tanzania. It is the third most important commercial fishery after Nile Perch and Nile Tilapia. Commercial exploitation started in the 1980's and its market demand is increasing with traders exporting it to neighbouring Kenya, South Sudan, Rwanda and Democratic Republic of Congo (DRC).

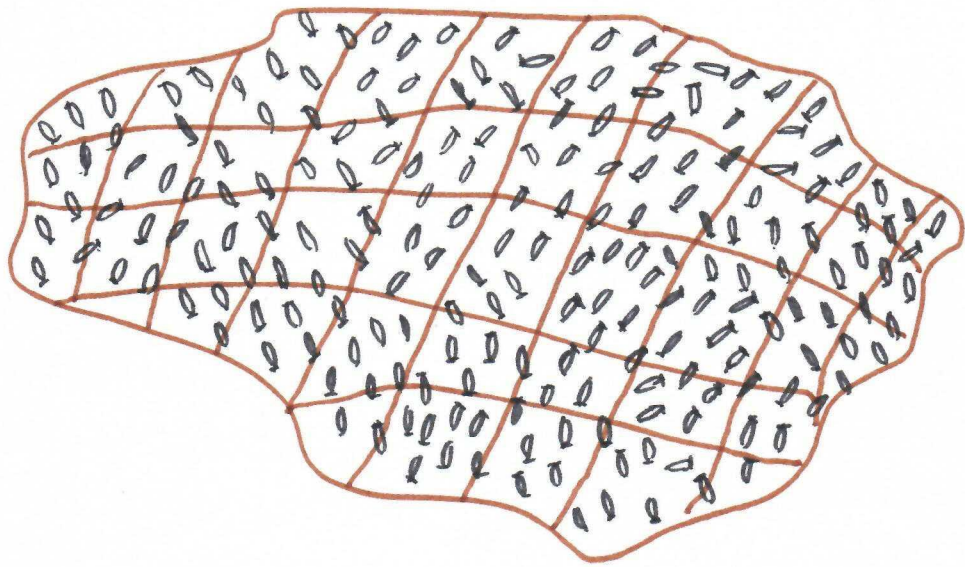
Mukene is known to contain valuable nutrients. It contains Calcium for strengthening bones, amino acids which boost immunity and prevent malnutrition, Vitamins A and E which prevent poor vision, proteins essential for building and repairing muscles, organs, skin, hair and other body tissues, Omega-3 fatty acids for helping heart and brain health. It is advisable for pregnant women and children.

### 1 Problem in ~~the~~ Service Area:

Poor handling, Processing, <sup>Packaging</sup> and Lack of Value Addition

Mukene Processing in Uganda is by and large sun drying. In this particular place, Mukene is sun dried on Old Lampara nets (these are the nets used for its harvesting) spread on grass or bare ground

A sketch of Mukene drying on old lampara nets  
Spread spread on bare ground. (2)



Preprocessing is by cleaning using contaminated sea shore water. Drying takes place between 6-9 hours on a bright sunny day and a lot longer in the wet season. Given its size 25-50mm long, high surface area/volume ratio and lipid content to lipid oxidation, <sup>but also microbial and enzymatic action</sup> Spoilage is high. Spoilage and lipid oxidation is higher when dried on bare ground. This situation is compounded during the rainy season, when sunlight intensity and duration is low and atmospheric moisture is high. The Odour associated with Spoilage constrains its consumption and market. During the wet season a sizeable proportion of catch is cheaply sold as fish meal for Poultry feed production, due to spoilage. Storage, Packaging and transportation is wanting. Fish handlers along the Value Chain have no protective gear. At the local level there is no value addition.

However Mukene can be grounded into powder and together with maize, millet or any other ingredients used as a supplement in food especially of infants and immunologically compromised patients. Deep fried Mukene may be used to make snacks.

## 2 Indian Experiences / Solutions / Innovations

Mukene is a small low value fish like Anchovies and Sardines harvested in India. The value chain for handling, processing and packaging these fish species has been improved. Raw materials are handled with ice, properly cleaned (with portable water), gutted and dried. Value is added by way of making snack foods, biscuits and bakery products. The products are properly packaged before transportation and marketing. This has turned the would-be low value "detestable" fish into an acceptable and marketable product, with attendant advantages of providing better nutrition to local community and wider public, better prices and profitability and employment to the local community especially the women.

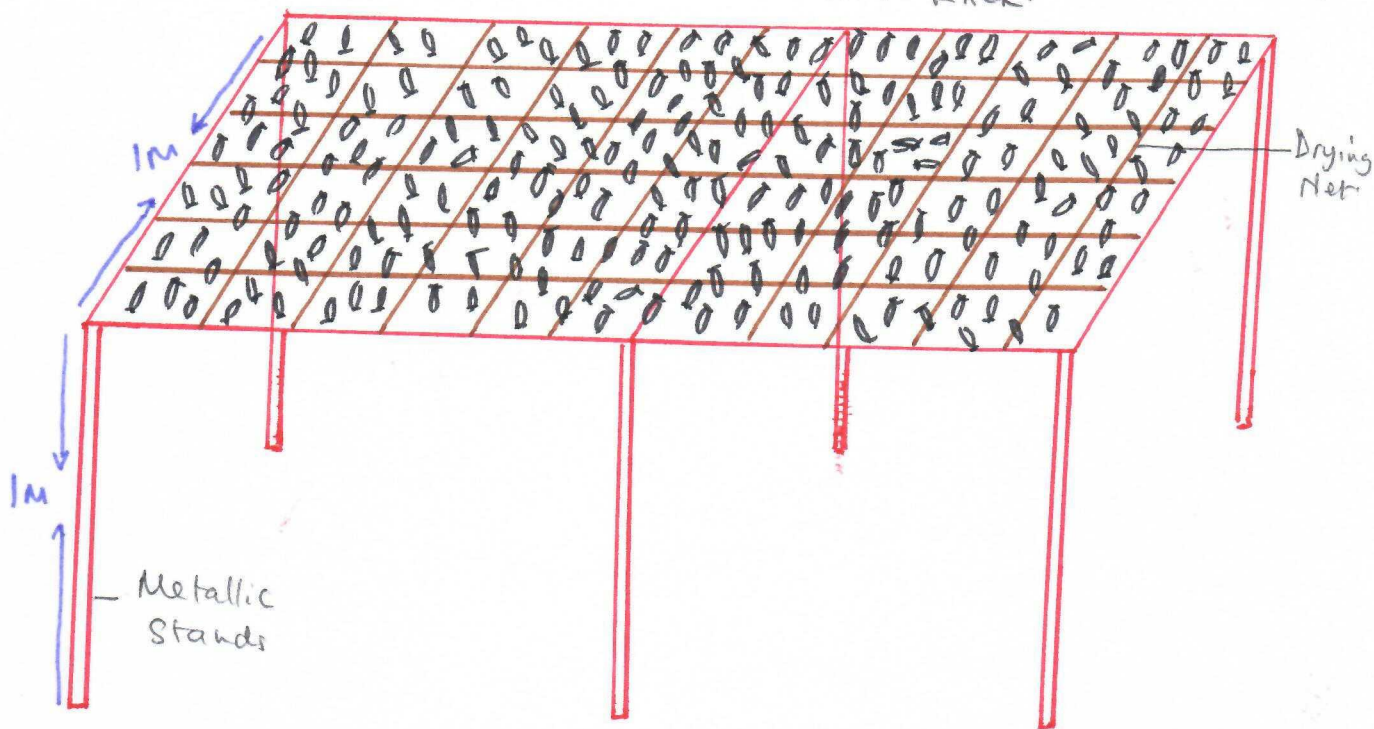
It is this Model which is envisioned.

Back at home the efforts will be geared towards;

- Improving handling of the Raw Material (catch)
- Proper cleaning with portable water to reduce microbial activity/load and spoilage.
- Sorting to remove debris and other ~~substances~~ physical substances.
- Sun drying on raised racks. This will serve to reduce microbial activity and lipid oxidation. Lipid oxidation is said to be higher on bare ground or on mesh nets laid on bare ground compared to the one on raised racks (Kubiriza K.G. 2016)
- Exploring opportunities for value addition.

## A SKETCH OF MUKENE RAISED DRYING RACK.

(4)



The opportunity at this place is that under a project which expired about 5 years ago, space was set aside, fenced and metallic racks/frames erected for purposes of improving Mukene fish handling.

~~Activities~~ Specific activities will include:-

- Preparation of Sundrying site
- Procuring the Sundrying nets
- Group formation
- Training and Mentoring (Importance of Mukene as a food and its valued nutrients, Quality assurance and food safety, Entrepreneurship, processing, Storage, Packaging and Marketing, etc)
- Exploring opportunities for value addition.

### 3 PLACE:

Bukungu Landing site, on the shores of Lake Kyoga Kidera sub county, Buyende District, Uganda. This is the largest Landing site in the District and most important for Mukene fishing, with over 200 Mukene fishing boats.

4. Target group:

Women Involved in the Mukene Value chain namely:  
Boat owners, handlers, processors and traders.

5. Duration: - Six (06) months.

6. Expected End Results:


- Improved ~~fish~~ Mukene fish handling, ~~and~~ processing and Packaging.
- Better Quality and safe Product.
- More acceptability, Consumability as human food and Marketability.
- Better Prices
- Improved household incomes
- Product Diversification

7. Any other Information:

The Market for Mukene and its products is growing and demand is steadily increasing with traders exporting it to neighbouring countries. This creates the need to comply with the food regulations i.e. :-

- Fish Quality Assurance Procedures and Upstream Controls.
- The East African Standardisation, Quality Assurance, Metrology and Test Act 2006. Which provides specifications for Dried Rastrineobola argentea

NAME: MUWADI JOHN

SIGNATURE 



## BACK AT WORK PLAN - TASK

You have received valuable inputs from experts at IIFPT and during field visits on various aspects of Plant protection. Please prioritize one important activity to be taken up by you when you returns back to your workplace. Care has to be taken to decide the activity which can be delivered smoothly in your official responsibility without seeking additional funds, manpower and other facilities. Prepare the Back at Work Plan for one most important activity in the following format.

**I. Name of the Activity:** Utilisation of Banana peelings into Animal feeds. (Training of farmers)

1. Problem in your service area:
  - High rate of land fragmentation leading to adoption of zero grazing system and hence lack of enough feeds for animals.
  - Wastage of Banana peels.
2. Indian Experiences / Solutions/ Innovations:
  - By-product processing
3. Place: Mitooma District - Western Uganda.
4. Target group: Dairy Farmer cooperative groups.
5. Duration: 6 months from June to December 2018
6. Expected end results:
  - 100 Farmers trained on use of <sup>Banana</sup> peels into animal feeds.
  - 4 tons of feeds produced from Banana peels
7. Any other information:
  - Using the Field extension officers to train farmers.
  - All gender groups to be involved in these trainings

Name:

Muwasiima Saverino

Signature



