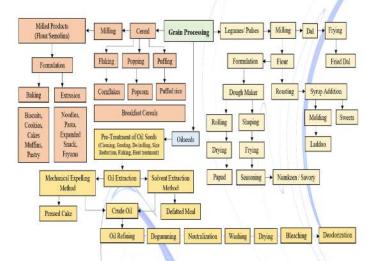
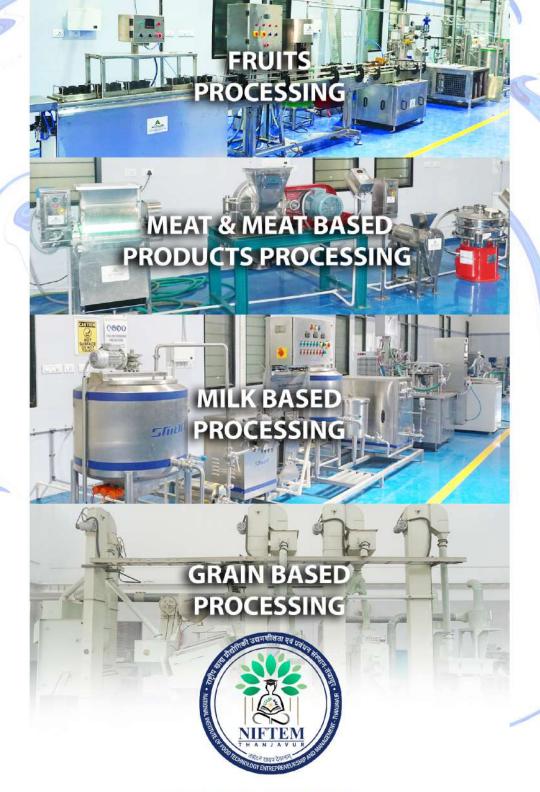
GRAIN BASED PROCESSING

- Grains, commonly referred to as cereals (maize, wheat, rice, millets), pulses (beans, peas, cowpeas), oilseeds (soybean, sunflower, linseed), which are nutritionally superior edible seeds.
- The cereals are rich in carbohydrate, pulses are rich in protein and oilseeds are rich source of oil.
- The products are Breakfast cereals, pasta, savoury, laddu, pastry, muffins, etc.





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An Institute of National Importance (Formerly Indian Institute of Food Processing Technology - IIFPT)

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Module - 7 **Food Domain: Knowledge Base**

Introduction to the different domains of Food Industry



सूक्ष्म उद्यमों का संबल

PM Formalisation of Micro food processing Enterprises Scheme (PMFME Scheme)

INTRODUCTION

- Food Processing is the transformation of agricultural products into food or of one form of food into other forms.
- Technology and advancements in food processing has helped in transforming Indian food processing industry but the technologies used are not up to date due to which the demand is greater in unorganized sector rather than organized sector of food processing.
- The Skill Pyramid reflects the Skills at a particular level of job role.

Skill Level 4

(skills which are highly specialised involving research and design)

Skill Level 3

(skills which require long drawn preparation as demonstrated by acquisition of degrees, and involve highly technical or commercial operations)

Skill Level 2

(skills which require technical training inputs, knowledge of complex operations and machinery, skills of supervision)

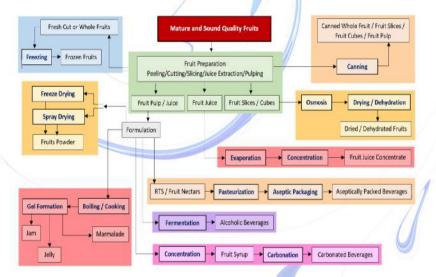
Skill Level 1

(skills which can be acquired with a short/modular and focussed intervention and thereby enhancing employability of those with minimal education)

It is therefore very much necessary to fill the skill gap in food processing industry, by imparting domain based knowledge to the human resources of unorganized food processing sectors.

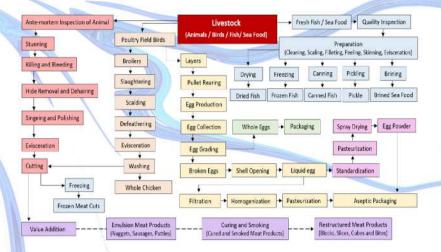
FRUITS PROCESSING

- Fruit can go through numerous types of processing including Canning, Freezing, Freeze Drying, Spray Drying, Osmosis, Drying, Dehydration, Fermentation, Pasteurization, Aseptic Packaging, etc.
- The method used to convert the fruit into a more usable form for processing and to obtain an edible portion from fruits is called as fruit preparation.
- Some types of processed fruit are fruit preserves, canned fruit and fruit juices.



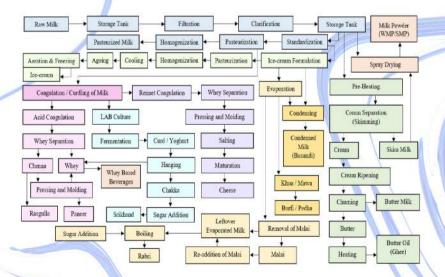
MEAT AND MEAT BASED PRODUCTS PROCESSING

- The products are rich source of animal protein and other nutrients.
- Being highly perishable in nature, care has to be taken while handling and processing of these products.
- Necessary for any personnel working in animal product processing industry to have a basic knowledge of processing steps and operations in order to maintain hygiene and safety.



MILK BASED PROCESSING

- It involves processing of raw milk into market milk having low bacterial count, good flavor and sufficient keeping quality as per Food Safety Standards
- It involves the basic processes of storage, separation, homogenization, curdling and pasteurization. the products are yogurt, butter, cheese, khoa, etc.



Active Packaging Systems



Biodegradable Packaging



TESTING OF PACKAGING MATERIALS

There are various agencies that provide standards or testing methods of packaging materials.



METHODS OF TESTING PACKAGING MATERIALS

- Physical properties
- Chemical Testing of Packaging Material
- Analysis of Mechanical Properties
- Biodegradability Testing
- Microbiological Degradation Test
- Compost Method
- Enzymatic Degradation Test
- Thermal Analysis Techniques











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Module - 7 Food Domain: Knowledge Base

Packaging Aspects for Micro food processing Enterprises



PM Formalisation of Micro food processing Enterprises Scheme (PMFME Scheme)

Packaging Aspects for micro food processing enterprises

WHAT IS FOOD PACKAGING?

- Packaging is the process of enclosing the product in order to identify the brand and also ensures its safety for storage and transport.
- The main objective of packaging is to provide safety and preserve the quality and freshness of food, to add appeal to the food to attract consumers, and to facilitate its storage and distribution.
- The basic functions of packaging are:
 - Containment
 - Protection
 - Preservation
 - Convenience
 - Communication



TYPES OF FOOD PACKAGING

- Primary Packaging: It is the material that first envelops the product and holds it. It should be complementary to the type of product being packed inside it.
- Secondary Packaging: It is the immediate outside packaging system to the primary packaging and provides additional protection to the primarily packed food product.
- Tertiary Packaging: It is used for bulk handling, warehouse storage and transport shipping purpose.



TYPES OF PACKAGING MATERIAL

The most commonly used industrial materials are:



PAPER



CARDBOARD





GLASS



FLEXIBLE PLASTIC FILMS



WOOD

PACKAGING SYSTEM

Form, Fill and Seal System



Aseptic Packaging System



Modified Atmosphere Packaging



Intelligent Packaging Systems



 Capacity building component under which various training is conducted for beneficiaries, Master Trainers and District Resource Persons for upgrading their technical knowledge and obtaining clarification of their queries related to the scheme.

Nazonal Institute of Food Technology, Laterpreneurs pard Mempersent (NFTIDE), Theripeur वर्तुन काम फैस्पीनियाँ, सामानीतात का अर्थन गोलान, तंत्रकुर					
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PMFME SNA/SLTVTP/DLTI Login Portal	Username				
Capacity building is an important component of PMEME Scheme. Under the Scheme, if emisaged to provide training to food processing entrepreneurs, various groups, such as SH					
FPOs/ Cooperatives, workers and other stake holders connected with the imprementation of	Preseword				
scheme such as government officials, project officials etc.					
Revised Capacity Building Buildlines dated 02.09.2022	Benjerriker Me Pargot your password?				
State Nodal Agency would play crucial role in implementation of Capacity Building of Fo					
Processing Enterprises. Some of the specific responsibilities are indicated below:	Log in				
 Overall coordination and monitoring of the capacity building component implementation state along with SLTIs and other supporting agencies. 	Forgot your username?				
Designate District level training Agencies, Normalation of Master Trainers and Trainers.					
 Organize Training of District level trainers (DLT) and Training of Beneficiaries (ToB) Preparation/ customization of state relevant training modules, dubbing or reproduction 	and the second s				
 Preparation customization in state research making incodes, busing or reproduction audio video content into the regional languages 	. 97				
Mobilization of beneficiones and co-ordination with NIFTEM-17 NIFTEM-K/ SLTI & ct.	ther				
Technical institutes for capacity building activities • Reporting the progress in capacity habiling activities to NPMU and respective Nation	m/				
institutes (NIFTEM-7/NIFTEM-K) from time to time and evaluation of the capacity build					
training programs					
Training of Beneficiaries - Target (2022-23)					
Training of Beneficiary Target Lipidated (2022-23)					
Guidelines for Engagement of Private Training providers by SNA					
1. Guidelines for Engagement of Phyote Agency at 19/01/2022					
Z. Expression of interest - Private training partner					
Download Reports:					
1. Qualified Meeter Trainers List					

• National ODOP webinars are conducted on Processing & Value addition of different products such as citrus, Mango, etc which serves as a common platform to share the technical information to establish a small scale / micro food processing plant on specific products.

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 Under the PMFME Scheme the main objective of incubation centre is to support the establishment of Incubation Center for ODOP and other products so that it can be utilize on commercial basis and provide training to the beneficiaries based on National Skill Framework.



For more details:

http://niftem-t.ac.in/olapp/ pmfme/ web/capacity1.php

 Other Institutes like CFTRI, DFRL, ICAR institutes, etc are playing a key role in the transformation of the food processing industry to be internationally competitive with particular reference to product safety, quality and presentation.



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Module - 7 Food Domain: Knowledge Base

Technology Solutions for Food Processing and Showcase of Existing Product Specific Training Material

Domain Knowledge Developed by Indian Food Research Institutes



PM Formalisation of Micro food processing Enterprises Schee (PMFME Scheme)

Introduction

- Ministry of Food Processing Industry (MoFPI) has launched the PM FME scheme under the Aatamnirbhar Bharat Abhiyan.
- The aim to enhance the competitiveness of existing individual micro-enterprises in the unorganized segment of the food processing industry and promote formalization of the sector.
- Under Capacity building component, NIFTEM Thanjavur and NIFTEM Kundli have developed various training materials and knowledge modules concerning the technical need in food processing.
- Through MOFPI-PMFME portal, people can also access the scheme guidelines, mandatory requirements for availing the subsidy of the scheme, ODOP products allotted for each district and training materials uploaded to provide basic technical knowledge on the processing of different commodities.



NIFTEM-K

(National Institute of Food Technology, Entrepreneurship and Management, Kundli)

NIFTEM Kundli has developed the domain wise training materials for both ODOP and EDP domain.



As a part of Entrepreneurship Development Domain, resource materials such as learning materials, videos are available for providing specific technical knowledge on Marketing & branding aspects of new products, Opportunity, Constraints & Feasibility of Micro Enterprises, FSSAI standards and other compliances required for starting an enterprise, IPR issues for entrepreneurs, Criteria to be considered in the preparation of DPR. Moreover, this serves as a technical platform to get access to the knowledge on micro food business management to the micro level entrepreneurs.



NIFTEM-T

(National Institute of Food Technology, Entrepreneurship and Management, Thanjavur)

NIFTEM Thanjavur has developed the portal and handling the portal management with different component of the scheme.



Under the PMFME Scheme:

Training materials are uploaded •

