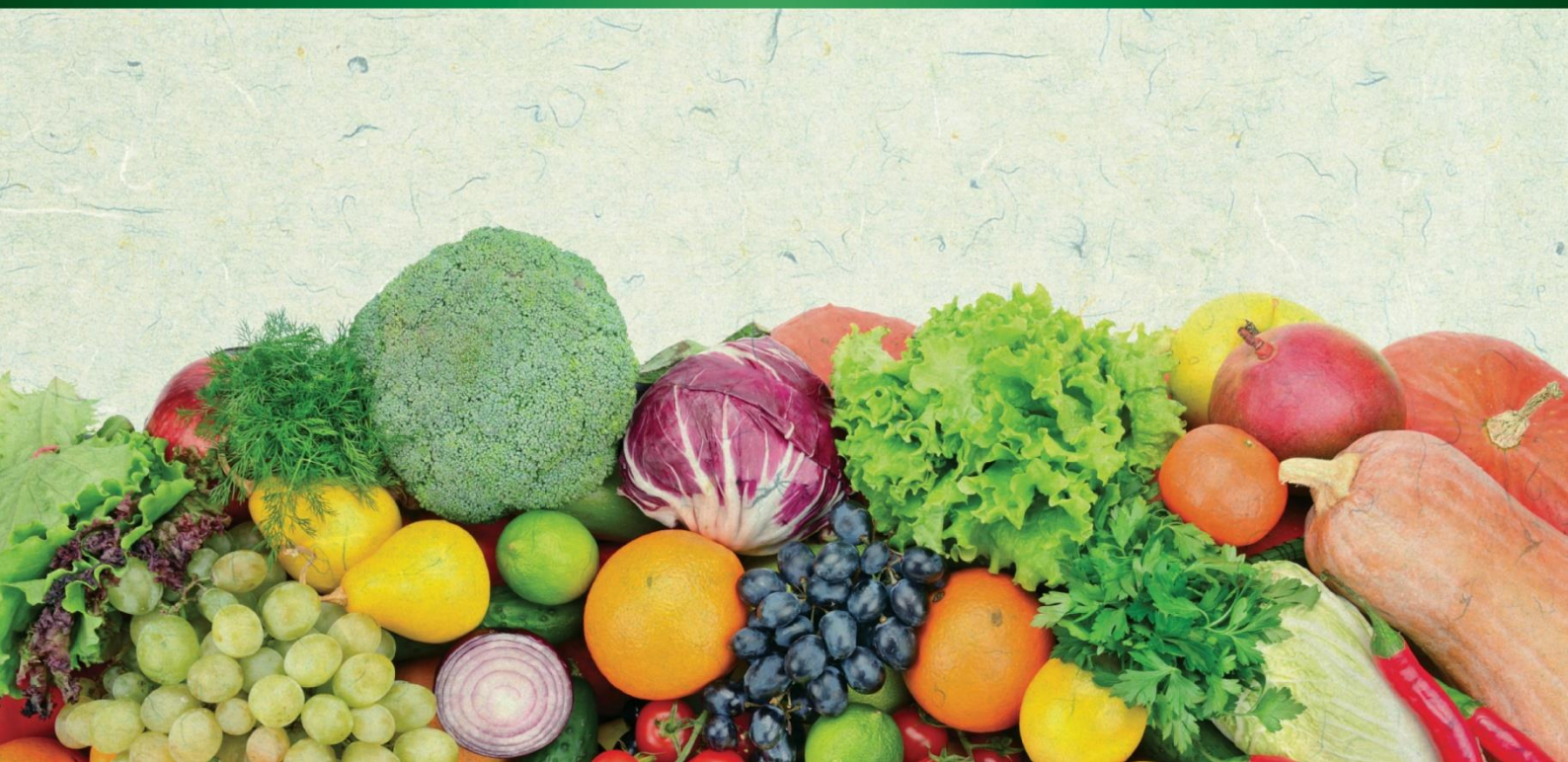




Capacity Building Handbook



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Capacity Building Framework

Capacity building component of PM FME Scheme essentially geared towards strengthening entrepreneurial capability of existing micro food processors and upgradation of the skill of the workers working in those units in critical areas like food handling, safety, hygiene and their own safety at plant level.

There are 3 levels of training proposed under this programme namely Training of Master Trainer (ToMT), Training of District level trainer (ToT) and Training of Beneficiary (ToB). Master trainers will be trained by the subject experts from sector specific national institutes, Master Trainer will impart training to district level trainers and district level trainers will conduct training to beneficiaries.

Major component of capacity building relevant to the target beneficiaries are EDP training and Product training.

Entrepreneurship Development (EDP+)

The standard Entrepreneurship Development Programs imparted under other MSME schemes will be customized to include health, hygiene, standard, quality aspect of food processing. Some of the important features of such ED program (EDP+) are as under:

- i. To impart knowledge on identification of business opportunities and preparation of business plan
- ii. Familiarization on procedure and formalities of setting of an enterprise including registration
- iii. Develop skills on management of a unit including their finance, regulatory and statutory requirements.
- iv. Hygiene, FSSAI standards, Weights & Measures regulation and registration etc. issues specific to food processing sector.

Product Specific Skilling

- i. Profile of products under the group, procurement and quality standards complementary products, by-products and their use
- ii. Profile of processing technology, overview of machinery, their costing any sourcing
- iii. Different types of packing, scientific storage, shelf life and food handling
- iv. Product quality and safety requirement as per the national and international standards
- v. Appreciation of the importance of quality of products in value addition, branding and marketing.

Domain Skills & Platform Skills

Domain Skills refers to the sector-specific skills, technical knowledge, and know-how to perform a specific job accurately. Platform Skills refers to presentation behaviors that a trainer uses to transmit content effectively. Trainers must demonstrate excellent platform skills to get their messages across. Both Master trainer and DLT would be trained for two core skills being domain skills and platform skills.

Modes of Delivery

The training would be delivered by following modes

- i. Classroom lecture & demonstration
- ii. Live classes(online)
- iii. Self-paced online learning material
- iv. Training on machines

Curriculum and Course Content

The curriculum of trainings is envisaged under national skills qualifications framework (NSQF) to ensure the quality and uniformity of training program throughout the country.

The details of education, qualification and experience required for various levels of training is as tabulated below.

Type of Training		Training	Duration	Eligibility		
				Qualification	Experience	
ToMT	Food Sub Domain		Domain Skills	20	UG/PG degree in Food Technology/Food Engg./ Food Science or any related subject to Food Processing.	Minimum 5 years
			Platform skills	16		
			Assessment	4		
			Total hr	40		
	EDP		Domain Skills	20	Diploma/Degree in Management/Trainers in EDP Institute of the State Govt., Private Institutions, RSETI, RUDSETI	Minimum 2 years
			Platform skills	16		
			Assessment	4		
			Total hr	40		
ToT	New Trainers		Domain Skills	32	UG degree/Diploma in Food Technology/Food Engg./Food Science or any related subject in Food processing.	Minimum 2 years
			Platform skills	28		
			Assessment	4		
			Total hr	64		
	EDP		Domain Skills	32	EDP Trainers of RSETI, RUDSETI and designated District level training Institute/Agencies	---
			Platform skills	32		
			Assessment	-		
			Total hr	64		
	Existing Trainers		Domain Skills	8	UG degree/ Diploma in Food Technology/Food Engg./Food Science or any related subject in Food processing.	Minimum 2 years
			Platform skills	4		
			Assessment	4		
			Total hr	16		
	EDP		Domain Skills	8	EDP Trainers of RSETI, RUDSETI and designated District level training Institute/Agencies.	---
			Platform skills	8		
			Assessment	-		
			Total hr	16		
Platform Skills			7			
		Total	24			
ToDRP	Food Domain		Total	16	Degree/Diploma in Food Tech, With or Without Experience OR Degree Diploma in Agri with Experience in Food Tech and Preparing DPR	---
	Non-Food Domain		Total	24		

*If Required



Syllabus for Training of Master Trainers (ToMTs) under PMFME Scheme



1.1 Fruits and Vegetable Processing

Technical Aspects: Processing, Value addition, Supply Chain, Machinery, Packaging and Storage, Procurement, Product Development, Food safety regulations & certification.

Training Time: 40 hr/5 days (Online+Offline)

Technical aspects		
Training Syllabus	Time duration (hr)	
	Online / Offline	Demo/ Self-learning
Domain Skills – 20 hr		
Introduction Overview of PMFME scheme, guidelines, objectives, capacity building framework and its implementation. status, market size and scope of fruit and vegetable processing industry in India; selection, procurement and supply chain management of fruits and vegetables for processing industry.	2	1
Plant layout and maintenance Introduction to food plant design - plant location - location factors, site selection - layout - objectives, classical and practical layout – preparation of process chart and machinery layout – product layout and process layout - repair and maintenance of equipment – preventive and breakdown maintenance – replacement of equipment.	2	1
Equipments and specifications of machineries in F&V processing Equipment involved in unit operations of fruits and vegetables. Specifications of machineries involved in fruits and vegetables processing. CIP: Cleaning & sanitization of processing equipment's: objectives, frequency, procedures, mechanical cleaning aspects, CIP system & program.	3	1
Value addition of fruits and vegetables Sugar conserves : Jams, jellies, marmalades. Beverages: Juices (carbonated and non-carbonated), squashes, syrups, nectars, RTS, crushes, cordial, fruit wine. Preparation of concentrates-puree, sauces, ketchups, soup, and paste. Preparation of pickles, and chutneys. Waste and by-products utilization.	2	4
Packaging of fruits and vegetable products Advance in packaging, different packaging materials, methods and machineries involved (primary, secondary and tertiary) in packaging of fruits and vegetables products. Selection of packaging materials standards for fruits and vegetable products. Recent packaging techniques to extend the shelf life of the product-aseptic packaging, tetra pack, convenient and smart packaging. Advances in storage of fruits and vegetables.	2	2
Platform Skills – 16 hr		
Food safety regulations & certification Need for testing of food, notified NABL labs, referral labs and reference labs in India. GMP, GHP, GLP practices relevant to fruits and vegetable processing. HACCP implementation program. Regulations and standards for maintaining food safety and quality - FSSAI and international standards – FSSAI packaging and labelling requirements. FSSAI registration and licensing procedure.	6	2
Soft skills and communication Importance of soft skills and communication -networking skills–creative& innovative thinking – problem management – stress and emotional management – leadership and teaming up – confidence building – entrepreneur competencies – risk taking and goal settings - effective communication skills.	6	2
Assessment by FICSI	4	-
Sub total	27	13
Total: 40 hr		

1.2 Dairy Processing

Technical Aspects: Processing, Value addition, Supply Chain, Machinery, Packaging and Storage, Procurement, Product Development, Food safety regulations & certification.

Training Time: 40 hr /5 days (Online + Offline)

Technical aspects		
Training Syllabus	Time duration (hr)	
	Online / Offline	Demo/ Self-learning
Domain Skills – 20 hr		
Introduction Overview of PMFME scheme, guidelines, objectives, capacity building framework and its implementation. status, market size and scope of dairy processing industry in India; Selection, procurement and supply chain management of milk for dairy processing industry.	2	1
Plant layout and maintenance Introduction to food plant design - plant location – location factors, site selection - layout - objectives, classical and practical layout – preparation of process chart and machinery layout – product layout and process layout –repair and maintenance of equipment – preventive and breakdown maintenance – replacement of equipment.	2	1
Equipments and specifications of machineries in M&P processing Equipment involved in unit operations of milk processing. Specifications of machineries involved in dairy industry. Selection and installation of storage tank, heat exchangers-chillers, pasteurizers, evaporators, plate heat exchangers; homogenizer; centrifuge; packaging machine. Refrigeration and chilling towers. Steam generation, supply and selection of boilers. Process control equipment and accessories for a complete milk processing plant. CIP: Cleaning & sanitization of processing equipment's: objectives, frequency, procedures, mechanical cleaning aspects, CIP system & program.	3	1
Processing and value addition of milk Processing of fluid milk- chilling, standardization, homogenization, pasteurization, cream separation, and packing. Sensitization about types of processed fluid milk- standardized milk, toned, double toned and skimmed milk. Aseptic processing of milk. Manufacturing of milk products- principle and procedures for preparation of curd, cream, butter, ghee, condensed milk, dried milk/milk products, ice-cream, khoa, paneer, cheese, buttermilk, skimmed milk powder, traditional Indian dairy products, and by-products utilization. Waste and by-products utilization.	2	4
Packaging of milk and milk products Advances in packaging, different packaging materials, methods and machineries involved (Primary, Secondary and tertiary) in packaging of milk and milk products. Selection of packaging materials, standards for milk and milk products. Recent packaging techniques to extend the shelf life of the product-aseptic packaging, convenient and smart packaging. Advances in storage of milk and milk products.	2	2
Platform Skills – 16 hr		
Food safety regulations & certification Need for testing of food, notified NABL labs, referral labs and reference labs in India. GMP, GHP, GLP practices relevant to dairy processing. HACCP implementation program. Regulations and standards for maintaining food safety and quality - FSSAI and International standards – FSSAI packaging and labelling requirements. FSSAI registration and licensing procedure.	6	2
Soft skills and communication Importance of soft skills and communication -networking skills–creative & innovative thinking – problem management – stress and emotional management – leadership and teaming up – confidence building – entrepreneurs competencies – risk taking and goal settings - effective communication skills.	6	2
Assessment by FICSI	4	-
Sub total	27	13
Total: 40 hr		

1.3 Grain Processing

Technical Aspects: Processing, Value addition, Supply Chain, Machinery, Packaging and Storage, Procurement, Product Development, Food safety regulations & certification.

Training Time: 40 hr/5 days (Online + Offline)

Technical aspects	Time duration (hr)	
	Online / Offline	Demo/ Self-learning
Training Syllabus		
Domain Skills – 20 hr		
Introduction Overview of PMFME scheme, guidelines, objectives, capacity building framework and its implementation. Status and scope of grain processing; Preprocessing of cereals and pulses: drying, cleaning, grading and detection of extraneous matter. Effect of different factors on various properties.	2	1
Equipments and specifications of machineries grain processing Production of whole wheat flour-atta/ maida, Suji, dalia- process and equipment: tempering, break and reduction, purifiers and sifters, flour blending comparison of milling of hard common wheat, soft wheat and durum wheat. flour classification and grading. Nutritional consequences of flour milling and flour enrichment. Turbo grinding and air-classification, flour grades and their suitability for baking purposes, assessment of flour quality and characteristics. Determination of dry and wet gluten content of flour.	2	2
Corn processing: Production corn flour-wet milling and dry milling method, corn pops and quality evaluation of popped corn. Preparation corn syrup. Paddy processing: Parboiling and milling of paddy, aging of rice, rice enrichment, processed rice products. Pulse milling: Pre-treatment in dal milling like cleaning, grading, soaking, and drying. milling pulses for production of dal, e.g. pigeon pea, green gram, bengal gram.	2	1
Cereal-based snack foods- and breakfast cereals pasta and noodle products. Preparation of expanded & puffed rice from raw and parboiled materials. Extruded products.	2	2
Packaging of grains and value-added products Advance in packaging, different packaging materials, methods and machineries involved (primary, secondary and tertiary) in grain processing and their value-added products. Selection of packaging materials and standards for grain products. Recent packaging techniques to extend the shelf life of the product technologies -aseptic packaging, tetra pack, MAP, hermetic packaging, convenient intelligent and smart packaging.	2	2
Plant layout and maintenance for grain processing Introduction to food plant design - plant location - location factors, site selection - layout - objectives, classical and practical layout – preparation of process chart and machinery layout – product layout and process layout - repair and maintenance of equipment – preventive and breakdown maintenance – replacement of equipment.	2	-
Platform Skills – 16 hr		
Food safety regulations & certification Need for testing of food, notified NABL labs, referral labs and reference labs in India. GMP, GHP, GLP practices, HACCP implementation program. Regulations and standards for maintaining food safety and quality –BIS, FSSAI and International standards – FSSAI packaging and labelling requirements. FSSAI registration and licensing procedure.	6	2
Soft skills and communication Importance of soft skills and communication -networking skills–creative& innovative thinking – problem management – stress and emotional management – leadership and teaming up – confidence building – entrepreneurs competencies – risk taking and goal settings - effective communication skills.	6	2
Assessment by FICSI	4	-
Sub total	27	13
Total: 40 hr		

1.4 Fish and Marine Processing

Technical Aspects: Processing, Value addition, Supply Chain, Machinery, Packaging and Storage, Procurement, Product Development, Food safety regulations & certification.

Training Time: 40 hr /5 days (Online + Offline)

Technical aspects		
Training Syllabus	Time duration (hr)	
	Online / Offline	Demo/ Self-learning
Domain Skills – 20 hr		
Introduction Overview of PMFME scheme, guidelines, objectives, capacity building framework and its implementation. Status, market size and scope of fish and marine food processing industry in India; Selection, procurement and supply chain management of fish and marine food for processing industry.	2	1
Plant layout and maintenance Introduction to food plant design - plant location - location factors, site selection - layout - objectives, classical and practical layout – preparation of process chart and machinery layout – product layout and process layout - repair and maintenance of equipment – preventive and breakdown maintenance – replacement of equipment.	2	1
Equipments and specifications of machineries in F&M processing Equipment involved in unit operations of fish and marine food processing. Specifications of machineries involved in fish and marine food processing. CIP: Cleaning & sanitization of processing equipment's: objectives, frequency, procedures, mechanical cleaning aspects, CIP system & program.	3	1
Value addition of fish and marine Handling and preservation - salt curing and smoking – drying of fish - freezing preservation - freezing methods– block frozen, IQF and cooked forms. Minced products - surimi process – fish meal- fish oil. Waste and by-products utilization.	2	4
Packaging of fish and marine Products Advance in packaging, different packaging materials, methods and machineries involved (primary, secondary and tertiary) in packaging of fish and marine products. Selection of packaging materials standards for fish and marine products. Recent packaging techniques to extend the shelf life of the product-aseptic packaging, convenient and smart packaging. Advances in storage of fish and marine products.	2	2
Platform Skills – 16 hr		
Food safety regulations & certification Need for testing of food, notified NABL labs, referral labs and reference labs in India. GMP, GHP, GLP practices relevant to fish and marine food processing. HACCP implementation program. Regulations and standards for maintaining food safety and quality - FSSAI and International standards – FSSAI packaging and labelling requirements. FSSAI registration and licensing procedure.	6	2
Soft skills and communication Importance of soft skills and communication -networking skills–creative& innovative thinking – problem management – stress and emotional management – leadership and teaming up – confidence building – entrepreneurs competencies – risk taking and goal settings - effective communication skills.	6	2
Assessment by FICSI	4	-
Sub total	27	13
Total: 40 hr		

1.5 Meat and Poultry Processing

Technical Aspects: Processing, Value addition, Supply Chain, Machinery, Packaging and Storage, Procurement, Product Development, Food safety regulations & certification.

Training Time: 40 hr/5 days (Online + Offline)

Technical aspects		
Training Syllabus	Time duration (hr)	
	Online / Offline	Demo/ Self-learning
Domain Skills – 20 hr		
Introduction Overview of PMFME scheme, guidelines, objectives, capacity building framework and its implementation. Status, market size and Scope of meat and poultry processing industry in India; Selection, procurement and supply chain management of meat and poultry for processing industry.	2	1
Plant layout and maintenance Introduction to food plant design - plant location – location factors, site selection - layout - objectives, classical and practical layout – preparation of process chart and machinery layout – product layout and process layout –modern abattoirs – repair and maintenance of equipment – preventive and breakdown maintenance – replacement of equipment.	2	1
Equipments and specifications of machineries in M&P processing Equipment involved in unit operations of meat and poultry processing. Specifications of machineries involved in meat and poultry processing. CIP: Cleaning & sanitization of processing equipment's: objectives, frequency, procedures, mechanical cleaning aspects, CIP system & program.	3	1
Value addition of meat and poultry Dried and smoked meat products. Comminuted meat products: sausages, semi dry sausages, dry sausages. Cured meat products. Restructured meat. Fried, broiled,roasted meat products. Braising and stewing of meat products. Curries, bacon, ham, cutlet-mix, chicken-n-ham and salami. Egg powder production, uses of egg powder in bakery and confectionary, noodles and pasta, mayonnaise and salad dressings. Waste and by-products utilization.	2	4
Packaging of meat and poultry products Advances in packaging, different packaging materials, methods and machineries involved (primary, secondary and tertiary) in packaging of meat and poultry products. Selection of packaging materials standards for meat and poultry products. Recent packaging techniques to extend the shelf life of the product-aseptic packaging, convenient and smart packaging. Advances in storage of meat and poultry products.	2	2
Platform Skills – 16 hr		
Food safety regulations & certification Need for testing of food, notified NABL labs, referral labs and reference labs in India. GMP, GHP, GLP practices relevant to meat and poultry processing. HACCP implementation program. Regulations and standards for maintaining food safety and quality - FSSAI and International standards – FSSAI packaging and labelling requirements. FSSAI registration and licensing procedure.	6	2
Soft skills and communication Importance of soft skills and communication -networking skills–creative& innovative thinking – problem management – stress and emotional management – leadership and teaming up – confidence building – entrepreneurs competencies – risk taking and goal settings - effective communication skills.	6	2
Assessment by FICSI	4	-
Sub total	27	13
Total: 40 hr		

1.6 Bakery and Confectionery Processing

Technical Aspects: Processing, Value addition, Supply Chain, Machinery, Packaging and Storage, Procurement, Product Development, Food safety regulations & certification.

Training Time: 40 hr/5 days (Online + Offline)

Technical aspects		
Training Syllabus	Time duration (hr)	
	Online / Offline	Demo/ Self-learning
Domain Skills – 20 h		
Introduction Overview of PMFME scheme, guidelines, objectives, capacity building framework and its implementation. Status, market size and scope of bakery and confectionery industries in India- raw materials for bakery and confectionery products specifications, compositions, role of raw materials - flour, types of flour, quality assessment of flour, sugar, shortenings, leavening agents, egg, salt, water, moistening agent, cocoa products, fruits, nuts, improvers, flavoring and coloring agents.	2	2
Production of bakery and confectionery products Bread making- methods- specification for various types of breads- manufacturing process of biscuit, cookies- crackers- buns- preservation of bakery products. Frozen bakery products. production of chocolate, fondant, caramels, fudge and toffee and cakes and pastries.	2	3
Bakery machinery and equipment: Identification and selection of bakery and confectionery equipment-weighing equipment- manual scale, automatic weigh, liquid measuring. Mixing- blenders, horizontal and vertical planetary, continuous. Make up equipment,divider, rounder, proofer, moulder. Baking equipment – different oven, slicer. Confectionery products machines.	2	2
Packaging of bakery and confectionery products Advance in packaging, different packaging materials, methods and machineries involved (primary, secondary and tertiary) in packaging. Selection of packaging materials and standards for baked products. Recent packaging techniques to extend the shelf life of the product. Technologies-MAP, hermetic packaging, convenient intelligent and smart packaging.	2	2
Plant layout and maintenance for bakery and confectionery processing: Introduction to food plant design - plant location - location factors, site selection - layout - objectives, classical and practical layout – preparation of process chart and machinery layout – product layout and process layout - repair and maintenance of equipment – preventive and breakdown maintenance – replacement of equipment.	2	1
Platform Skills – 16 hr		
Food safety regulations & certification Need for testing of food, notified NABL labs, referral labs and reference labs in India. GMP, GHP, GLP practices, HACCP implementation program. Regulations and standards for maintaining food safety and quality –BIS, FSSAI and International standards – FSSAI packaging and labeling requirements. FSSAI registration and licensing procedure.	6	2
Soft skills and communication Importance of soft skills and communication -networking skills–creative& innovative thinking – problem management – stress and emotional management – leadership and teaming up – confidence building – entrepreneur’s competencies – risk taking and goal settings - effective communication skills.	6	2
Assessment by FICSI	4	-
Sub total	27	13
Total: 40 hr		

1.7 Fat and Oil Seed Processing

Technical Aspects: Processing, Value addition, Supply Chain, Machinery, Packaging and Storage, Procurement, Product Development, Food safety regulations & certification.

Training Time: 40 hr/5 days (Online + Offline)

Technical aspects		
Training Syllabus	Time duration (hr)	
	Online / Offline	Demo/ Self-learning
Domain Skills – 20 hr		
Introduction Overview of PMFME scheme, guidelines, objectives, capacity building framework and its implementation. Status, market size and scope of fats and oil seed processing industry in India; Selection, procurement and supply chain management of fats and oil seed for processing industry.	2	1
Processing of fats and oil seeds Milk and animal fats: Production, characteristics, composition, processing and utilization of milk fats and butter, animal fats such as lard and tallow, fish and marine oils and waste and by-products utilization. Edible oil sources: Coconut, palm, palm kernel, olive, cocoa butter, sunflower, safflower, sesame, groundnut, mustard, rapeseed, canola, soybean, linseed, castor, rice-bran, cottonseed, corn. Processing of oils seeds and refining oil. By product utilization of oil milling industries.	2	4
Equipments and specifications of machineries in fats and oil seed processing Equipment involved in unit operations of fats and oil seed processing. Specifications of machineries involved in fats and oil seed processing. CIP: Cleaning & sanitization of processing equipment's: objectives, frequency, procedures, mechanical cleaning aspects, CIP system & program.	3	1
Packaging of fats and oils Advance in packaging, requirements, different packaging materials, methods and machineries involved (primary, secondary and tertiary) in packaging of fats and edible oils. Selection of packaging materials standards for fats and oils. Advances in storage of fats and oils. - changes during storage –rancidity – causes – atmospheric oxidation and enzyme action – free fatty acid – color.	2	2
Plant layout and maintenance Introduction to food plant design - plant location - location factors, site selection - layout - objectives, classical and practical layout – preparation of process chart and machinery layout – product layout and process layout - repair and maintenance of equipment – preventive and breakdown maintenance – replacement of equipment.	2	1
Platform Skills – 16 hr		
Food safety regulations & certification Need for testing of food, notified NABL labs, referral labs and reference labs in India. Concept of quality assurance and quality control in relation to fat and oil industry; quality management systems - ISO 9000; TQM, HACCP, GMP, GHP, GLP relevant to fat and oilseed processing; role of International organizations-ISO, IDF, CAC, AOAC and WTO, National organizations - BIS, Agmark; significance of oil and allied products order, FSSAI and APEDA in oil industry; guidelines for setting up quality control laboratory. Legislation on fats and oils, packaging laws and testing of packaged materials.	6	2
Soft skills and communication Importance of soft skills and communication -networking skills–creative & innovative thinking – problem management – stress and emotional management – leadership and teaming up – confidence building – entrepreneurs competencies – risk taking and goal settings - effective communication skills.	6	2
Assessment by FICSI	4	-
Sub total	27	13
Total: 40 hr		

1.8 Spices and Plantation Crops Processing

Technical Aspects: Processing, Value addition, Supply Chain, Machinery, Packaging and Storage, Procurement, Product Development, Food safety regulations & certification.

Training Time: 40 hr/5 days (Online + Offline)

Technical aspects		
Training Syllabus	Time duration (hr)	
	Online / Offline	Demo/ Self-learning
Domain Skills – 20 hr		
Introduction Overview of PMFME scheme, guidelines, objectives, capacity building framework and its implementation. Status, market size and scope of spices and plantation crop processing industry in India; Selection, procurement and supply chain management of spices and plantation crop for processing industry.	2	1
Equipments and specifications of machineries in spices and plantation crop processing Different unit operations pertaining to spices and plantation crops processing. Equipment involved in unit operations of different spices and plantation crop processing. Specifications of machineries involved in spices and plantation crop processing. CIP: Cleaning & sanitization of processing equipment's: objectives, frequency, procedures, mechanical cleaning aspects, CIP system & program.	3	1
Value addition of spices and plantation crops Spices: Extracts-essential oils, oleoresin, flavor and natural color and pigments. Preparation of powders, dried spices and condiments, dehydrated products. Pepper- dehydrated green pepper, white pepper and canned pepper. Ginger- wine, ginger preserve. Turmeric – curcumin processing. Chillies – brined chilli, pickle and sauce preparation. Waste and by-products utilization. Plantation crops: Coconut – processing of coconut milk, milk powder, coconut oil extraction, virgin coconut oil, activated carbon and husk. Cashew – nut processing, cashew apple juice preparation. Cocoa – cocoa butter processing.	2	4
Packaging of spices and plantation crop products Advance in packaging, different packaging materials, methods and machineries involved (primary, secondary and tertiary) in packaging of spices and plantation crop and their value-added products. Selection of packaging materials and standards for spices and plantation crop products. Recent packaging techniques to extend the shelf life of the product such as oil, oleoresin, coconut milk, preserve and juices. Technologies - aseptic packaging, tetra pack, MAP, hermetic packaging, convenient intelligent and smart packaging. Advances in storage of spices and plantation crops.	2	2
Plant layout and maintenance for spices and plantation crops processing Introduction to food plant design - plant location - location factors, site selection - layout - objectives, classical and practical layout – preparation of process chart and machinery layout – product layout and process layout - repair and maintenance of equipment – preventive and breakdown maintenance – replacement of equipment.	2	1
Platform Skills – 16 hr		
Food safety regulations & certification Need for testing of food, notified NABL labs, referral labs and reference labs in India. GMP, GHP, GLP practices, ASTA standards for clean spices and CODEX national and international standards relevant to black pepper, cardamom, turmeric, ginger, tamarind, curry leaf and coriander in spices and tea, coffee, cocoa, cashew, rubber in plantation crops. HACCP implementation program. Regulations and standards for maintaining food safety and quality –BIS, FSSAI and International standards – FSSAI packaging and labelling requirements. FSSAI registration and licensing procedure.	6	2
Soft skills and communication Importance of soft skills and communication -networking skills–creative & innovative thinking – problem management – stress and emotional management – leadership and teaming up – confidence building – entrepreneurs competencies – risk taking and goal settings - effective communication skills.	6	2
Assessment by FICSI	4	-
Sub total	27	13
Total: 40 hr		

1.9 Minor Forest Produce Processing

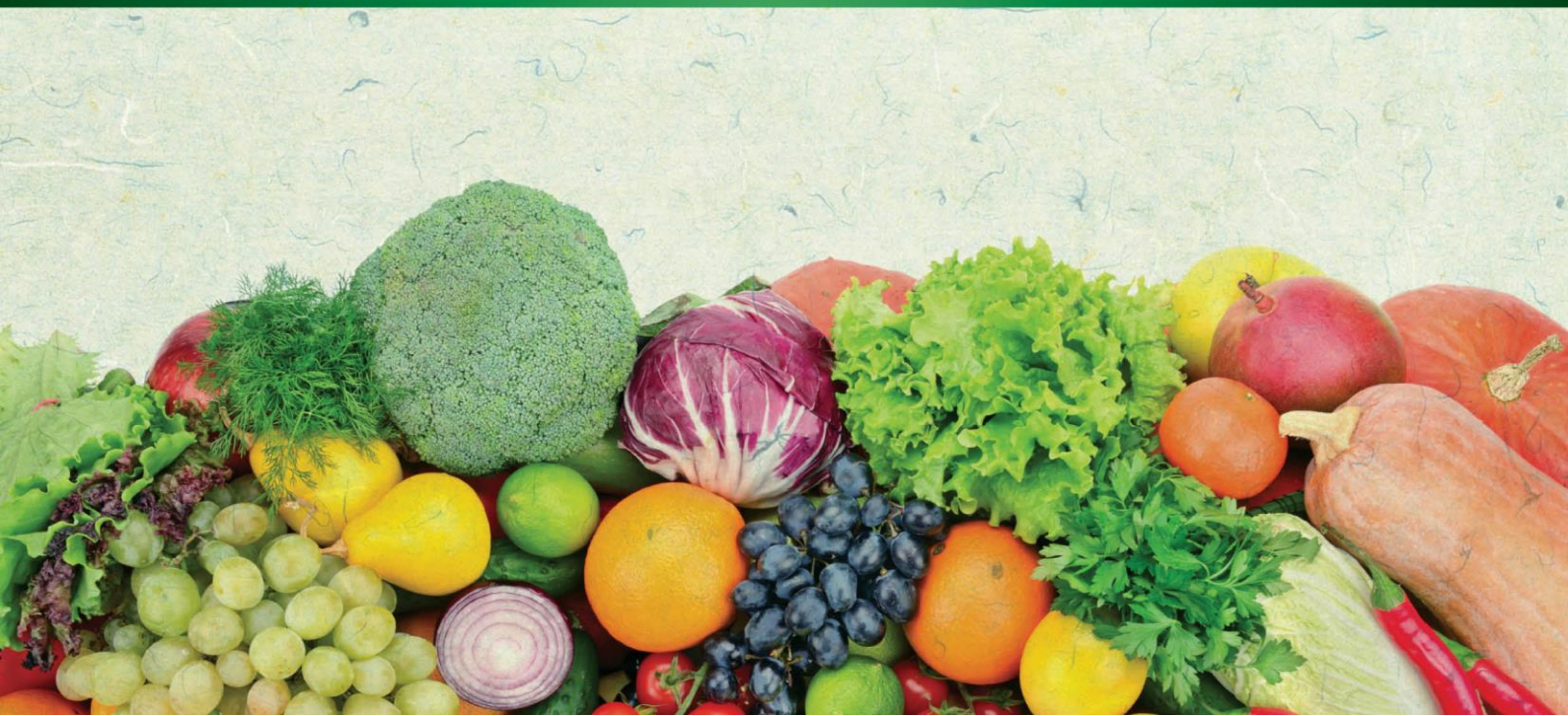
Technical Aspects: Processing, Value addition, Trading, Machinery, Packaging and Storage, Procurement, Food safety regulations & certification.

Training Time: 40 hr/5 days (Online + Offline)

Technical aspects		
Training Syllabus	Time duration (hr)	
	Online / Offline	Demo/ Self-learning
Domain Skills – 20 hr		
Introduction Overview of PMFME scheme, guidelines, objectives, capacity building framework and its implementation. Status and scope of minor forest produce (MFP); Types of minor forest produce under different categories – medicinal, essential oils. Edible wild plants, gums, resins, natural coloring materials etc.	2	1
Collection & trading of minor forest produce Significance in tribal economy–sustainable cultivation & collection methods, mechanism of marketing of minor forest produce – minimum support price- promotion	2	1
Equipments and specifications of machineries in minor forest produce Equipment involved in collection of minor forest produce. Specifications of machineries involved in processing of different minor forest produce. CIP: Cleaning & sanitization of processing equipment's: objectives, frequency, procedures, mechanical cleaning aspects, CIP system & program.	3	1
Value addition of minor forest produce Sugar conserves: Jams, jellies, toffee. Beverages: Juices, squashes, syrups, nectars, RTS. Preparation of concentrates-puree, soup, and paste. Preparation of pickles, and chutneys. Medicinal & aromatic products.	2	4
Packaging of minor forest products Different packaging materials, methods and machineries involved (primary, secondary and tertiary) in packaging of MFP & their value-added products. Selection of packaging materials standards for minor forest produce. Recent packaging techniques to extend the shelf life of the product. Storage of value added products from minor forest produce.	2	2
Platform Skills – 16 hr		
Food safety regulations & certification Need for testing of food, notified NABL labs, referral labs and reference labs in India. GMP, GHP, GLP practices relevant to minor forest produces. Indian forest act, status of certification of Non-Timber Forest Products (NFTP). FSSAI registration and licensing procedure.	6	2
Soft skills and communication Importance of soft skills and communication -networking skills–creative & innovative thinking – problem management – stress and emotional management – leadership and teaming up – confidence building – entrepreneurs competencies – risk taking and goal settings - effective communication skills.	6	2
Assessment by FICSI	4	-
Sub total	27	13
Total: 40 hr		



EDP Training Syllabus for Master Trainers under PMFME Scheme



COMPONENT 1: DOMAIN SKILLS

Time allotted: 20 hours [15 hours of training and 5 hours of self-study]

Day – 1		
Session	Content	Resource Person
1	Business Opportunity Identification <ul style="list-style-type: none"> Introduction to Entrepreneurship Opportunity Selection Criteria for Entrepreneurship Opportunity Identification Evaluation of Entrepreneurship opportunity viability Tools & Process to evaluate the viability of Entrepreneurship opportunity Basic Approach for Need Analysis for identifying Entrepreneurship opportunity Case Study and Market Study 	1.5 Hr. Online interactive teaching + 30 min self-learning
2	Feasibility Analysis & Business Model <ul style="list-style-type: none"> About Entrepreneurship, how to become Entrepreneur; Characteristics of Successful Entrepreneurs Creativity & Entrepreneurship: Identification of opportunity; Creative problem-solving process; Barriers to creativity Business Plan: Need of business plan; Elements of business Plan; Financial and organizational feasibility of business plan Family Business Plan: Concept, Benefits and different stages of family business plan; Types and Model of family business plan; Challenges faced by family business plan Feasibility study: Introduction to concept and different types of feasibility study 	1.5 Hr. Online interactive teaching + 30 min self-learning
3	IPR issues for entrepreneurs <ul style="list-style-type: none"> Introduction to IPR Types of IPRs: Patents, Trade Mark, Industrial Design, Trade Secrets, Geographic Indications How to file an IPR patent About Copyrights Kind of Property rights: Economical and Moral 	1.5 Hr. Online interactive teaching + 30 min self-learning
4	Creation of enterprise: Legal Aspects <ul style="list-style-type: none"> Introduction, main features, merits, limitation and how-to setup seven different types of business forms as under: <ol style="list-style-type: none"> Sole Proprietorship Hindu Undivided Family (HUF) Partnership Limited Liability Partnership Company Trust Society MSME registration Process and revised classification GST Registration 	1.5 Hr. Online interactive teaching + 30 min self-learning
Day - 2		
1	Marketing & Branding <ul style="list-style-type: none"> Marketing Marketing mix Product mix & Product line Segmentation, Targeting, Positioning(STP) Branding 	1.5 Hr. Online interactive teaching + 30 min self-learning
2	New Product Development <ul style="list-style-type: none"> New Product Development Product Data Management Product life cycle management Digital Marketing 	1.5 Hr. Online interactive teaching + 30 min self-learning
3	Understanding Financial Statements <ul style="list-style-type: none"> Understanding Income statements Balance sheet Profit & loss statements 	1.5 Hr. Online interactive teaching + 30 min self-learning
4	DPR and Bank Credit <ul style="list-style-type: none"> DPR Types of bank finance Assessment of credit facility Financial information in DPR Three financial statements(Income statements, cash flow statements, Balance sheet) Three critical tests of financial health 	1.5 Hr. Online interactive teaching + 30 min self-learning

335328/2021/FME	Basic ratios for liquidity <ul style="list-style-type: none"> • Basic ratios for profitability • Ratios for solvency • Bank decision to sanction credit • Dealing with the bank (cash credit accounts, credit accounts) 	
Day – 3		
1	Digital Marketing skills for Business Development/Digital Marketing and Lead Generation for Micro Small Business/Digital Marketing in pursuit of value chain consolidation for small and micro business	1.5 Hr. Online interactive teaching
2	Incorporating a proprietorship, Partnership, Limited Liability partnership and private/Public Limited, Companies legal modalities.	1.5 Hr. Online interactive teaching
3	Hygiene, FSSAI standards and Registration etc. issues specific to food processing sector. Weights & Measures Regulation	1.0 Hr.

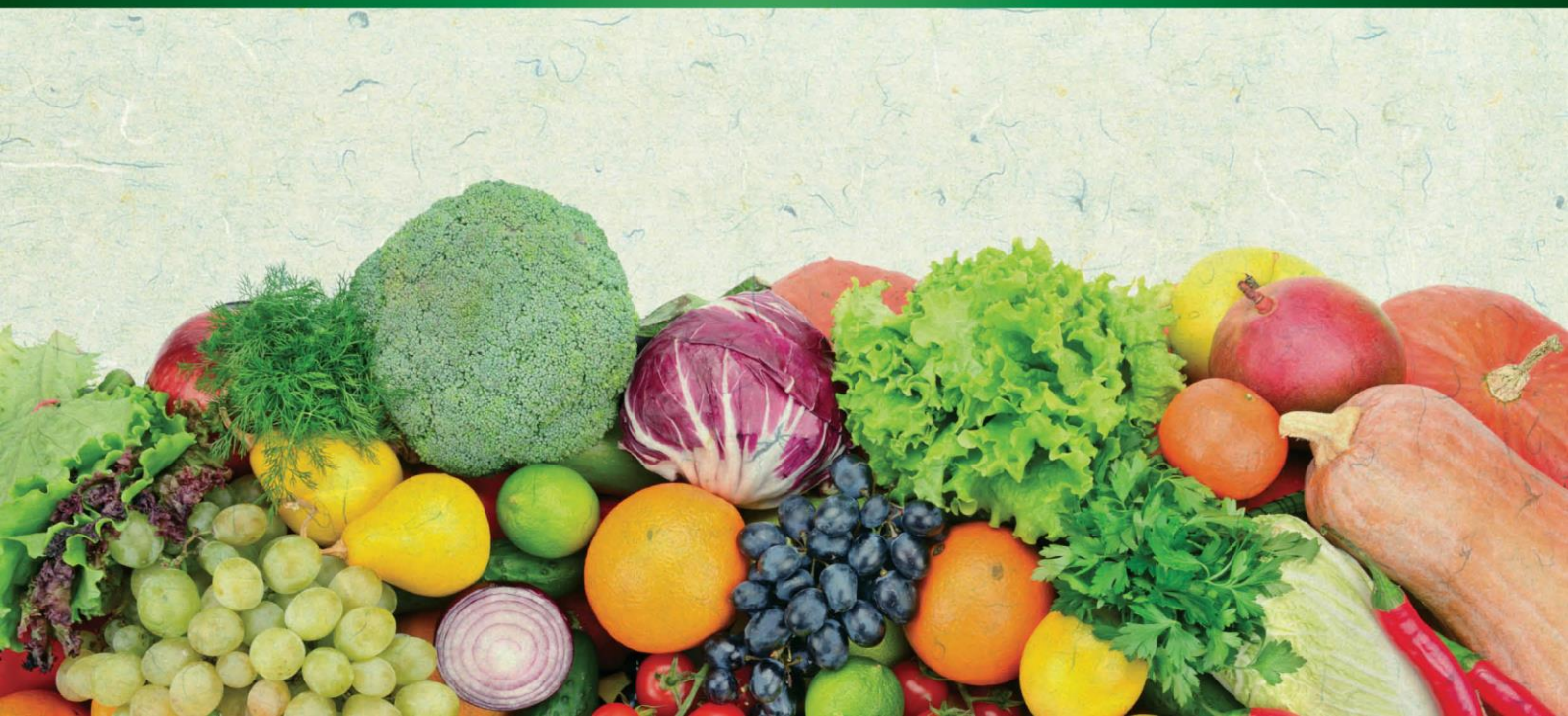
COMPONENT 2: PLATFORM SKILLS

Time allotted: Time allotted: 16 hours [12 hours of training and 4 hours of self-study]

Day - 3			
Session	Topic	Lecture	Activity
1	Advance Facilitation Practice & Apply Principles of Professional Practice at Workplace.	<ul style="list-style-type: none"> • Professional skill development using G Suite tools. • Personal and professional advancement. 	Performance and efficiency enhancement activity Personal advancement form
2	Evaluation of Training Programs	<ul style="list-style-type: none"> • Champion Task • Execute the learnings to trainings. 	Survey: Plan to enhance performance and efficiency Group Discussion
3	Competency Based Assessment. Role of Technology and Analytics	<ul style="list-style-type: none"> • 7 Habits of Great Trainers • Golden Badge Task 	Read the article and mention how you plan to put into practice each of the Habit mentioned
		<ul style="list-style-type: none"> • Techniques for assessment Validation & Reliability • Common Mistakes in Skill Training • How to conduct survey • Six principles to manage oneself 	Prepare own training calendar using google calendar and take a screenshot of your calendar. Upload the picture of your calendar on Workplace Group.
4	Assessment by FICSI		4 Hr.



Syllabus for Training of New Trainers (ToTs) under PMFME Scheme



3.1 Fruits and Vegetable Processing

Technical Aspects: Processing, Value addition, Supply Chain, Machinery, Packaging and Storage, Procurement, Product Development, Food safety regulations & certification.

Training Time: 64 hr/8 days (Online + Offline)

Technical aspects		
Training Syllabus	Time duration (hr)	
	Online / Offline	Demo/ Self-learning
Domain Skills – 32 hr		
Introduction Overview of PMFME scheme, guidelines, objectives, capacity building framework and its implementation. Status, market size and Scope of fruit and vegetable processing industry in India; Selection, Procurement and supply chain management of fruits and vegetables for processing industry; Imparting skills on various equipment's used for primary processing, cleaning, washing, sorting and handling, and its maintenance and precautions.	3	2
Equipments and specifications of machineries in F&V processing Various methods of fruit and vegetable preservation: Minimal processing, blanching, canning, drying, dehydration, juice extraction, freezing and freeze-drying of fruits and vegetables. Equipment involved in unit operations of Fruits and Vegetables. Specifications of machineries involved in fruits and vegetables processing. CIP: Cleaning & sanitization of processing equipment's: objectives, frequency, procedures, mechanical cleaning aspects, CIP system & program.	4	3
ODOP Specific Value addition of Fruits and Vegetables General: Variety of fruit and Vegetable available in the district: Sugar conserves: Jams, jellies, marmalades. Beverages: Juices (carbonated and non-carbonated), squashes, syrups, nectars, RTS, crushes, cordial, fruit wine. Preparation of concentrates-puree, sauces, ketchups, soup, and paste. Preparation of pickles, and chutneys. Waste and byproducts utilization: pomace utilization, extraction and product developments from F&V wastes. ODOP: Beneficiaries/micro entrepreneurs will be trained on their district specific ODOP by DLTs based on above generalized F&V value addition. For example: Guava juice processing – sorting – washing – juice extraction – clarification of juice – fortification – homogenization – pasteurization – bottling – branding.	6	4
Packaging of Fruits and Vegetable Products Advances in packaging, different packaging materials, methods and machineries involved (Primary, Secondary and tertiary) in packaging of fruits and vegetables products. Selection of packaging materials standards for fruits and vegetable products. Recent packaging techniques to extend the shelf life of the Product-Aseptic packaging, tetra pack, convenient and smart packaging. Advances in storage of fruits and vegetables including low temperature, CA and MA storage.	4	2
Plant layout and maintenance Introduction to food plant design - plant location - location factors, site selection - layout - objectives, classical and practical layout – preparation of process chart and machinery layout – product layout and process layout - Repair and maintenance of equipment – preventive and breakdown maintenance – replacement of equipment.	3	1
Platform Skills – 28 hr		
Food safety regulations & certification Need for testing of Food, notified NABL labs, Referral Labs and Reference Labs in India. GMP, GHP, GLP practices relevant to fruits and vegetable processing. HACCP implementation program. Regulations and standards for maintaining food safety and quality - FSSAI and International standards – FSSAI packaging and labelling requirements. FSSAI registration and licensing procedure.	8	4
Soft skills and Communication Importance of soft skills and communication - Networking skills–Idea generation, creative & innovative thinking – problem management – stress and emotional management – leadership and teaming up – Confidence building – entrepreneurs competencies – risk taking and goal settings - Effective communication skills- Knowledge on UPI and digital transaction.	10	6
Assessment by FICSI	4	-
Sub total	42	22
Total: 64 hr		

3.2 Dairy Processing

Technical Aspects: Processing, Value addition, Supply Chain, Machinery, Packaging and Storage, Procurement, Product Development, Food safety regulations & certification.

Training Time: 64 hr/8 days (Online + Offline)

Technical aspects		
Training Syllabus	Time duration (hr)	
	Online / Offline	Demo/ Self-learning
Domain Skills – 32 hr		
Introduction Overview of PMFME scheme, guidelines, objectives, capacity building framework and its implementation. Status, market size and Scope of dairy processing industry in India; Selection, Procurement and supply chain management of milk for dairy processing industry.	3	2
Equipments and specifications of machineries in M&P processing Equipment involved in unit operations of Milk processing. Specifications of machineries involved in dairy industry. Selection and installation of storage tank, heat exchangers-chillers, pasteurizers, evaporators, plate heat exchangers; homogenizer; centrifuge; packaging machine. Refrigeration and chilling towers. Steam generation, supply and selection of boilers. Process control equipment and accessories for a complete milk processing plant. CIP: Cleaning & sanitization of processing equipment's: objectives, frequency, procedures, mechanical cleaning aspects, CIP system & program..	4	3
ODOP Specific Processing and value addition of Milk General: Processing of fluid milk- Chilling, standardization, homogenization, pasteurization, cream separation, and packing. Sensitization about types of processed fluid milk- standardized milk, toned, double toned and skimmed milk. Aseptic processing of milk. Manufacturing of Milk products- principle and procedures for preparation of curd, cream, butter, ghee, condensed milk, dried milk/milk products, ice-cream, khoa, paneer, cheese, buttermilk, skimmed milk powder, traditional Indian dairy products, novel isolated milk components – whey protein isolates, hydrolyzed whey protein, casein, lactose waste and by-products utilization. ODOP: Beneficiaries/micro entrepreneurs will be trained on their district specific ODOP by DLTs. For example: Ice cream – blending – batch pasteurization – homogenization – addition of color and flavour – ageing – cooling – homogenization- batch freezing –packing – hardening.	6	4
Packaging of Milk and Milk Products Advances in packaging, different packaging materials, methods and machineries involved (Primary, Secondary and tertiary) in packaging of milk and milk products. Selection of packaging materials, standards for milk and milk products. Recent packaging techniques to extend the shelf life of the Product-Aseptic packaging, convenient and smart packaging. Advances in storage of milk and milk products.	4	2
Plant layout and maintenance Introduction to food plant design - plant location – location factors, site selection - layout - objectives, classical and practical layout – preparation of process chart and machinery layout – product layout and process layout –Repair and maintenance of equipment – preventive and breakdown maintenance – replacement of equipment. PRP and OPRP Guidelines- Waste disposal – Sewage treatment.	3	1
Platform Skills – 28 hr		
Food safety regulations & certification Need for testing of Food, notified NABL labs, Referral Labs and Reference Labs in India. GMP, GHP, GLP practices relevant to dairy processing. HACCP implementation program. Regulations and standards for maintaining food safety and quality - FSSAI and International standards – FSSAI packaging and labelling requirements. FSSAI registration and licensing procedure – Instant Adulteration Test Procedures and Safe Microbial load of Unprocessed milk.	8	4
Soft skills and Communication Importance of soft skills and communication -Networking skills–creative& innovative thinking – problem management – stress and emotional management – leadership and teaming up – confidence building – entrepreneur's competencies – risk taking and goal settings - effective communication skills.	10	6
Assessment by FICSI	4	-
Sub total	42	22
Total: 64 hr		

3.3 Grain processing

Technical Aspects: Processing, Value addition, Supply Chain, Machinery, Packaging and Storage, Procurement, Product Development, Food safety regulations & certification.

Training Time: 64 hr/8 days (Online + Offline)

Technical aspects		
Training Syllabus	Time duration (hr)	
	Online / Offline	Demo/ Self-learning
Domain Skills – 32 hr		
Introduction: Overview of PMFME scheme, guidelines, objectives, capacity building framework and its implementation. Status and Scope of grain processing; Preprocessing of cereals and pulses: drying, cleaning, grading and Detection of extraneous matter. Effect of different factors on various properties	3	2
Equipments and specifications of machineries in Grain Processing Equipment involved in unit operations of Grain processing. Specifications of machineries involved in Grain Processing industry. Selection and installation of Pre Cleaner – Rubber Roll Husker – Husk Aspiration- Paddy Separator – De Stoner – Abrasive Whitener – Friction Whitener – Sifter – Mist Polisher – length grader – Head Rice Bin – Bagging. sanitization of processing equipment's: objectives, frequency, procedures.	4	3
ODOP Specific Processing and value addition of Grains General: Variety of food grains available in the district: Corn processing: Production corn flour-wet milling and dry milling method, corn pops and quality evaluation of popped corn. Preparation corn syrup. Paddy processing: Parboiling and milling of paddy, aging of rice, Rice enrichment, Processed rice products. Pulse milling: Pre-treatment in dal milling like cleaning, grading, soaking, and drying. Milling pulses for production of dal, e.g. pigeon pea, green gram, Bengal gram. ODOP: Beneficiaries/micro entrepreneurs will be trained on their district specific ODOP by DLTs. For example: Cereal-Based Snack Foods- and breakfast cereals Pasta and Noodle Products. Preparation of expanded & puffed rice from raw and parboiled materials. Extruded products	6	4
Packaging of Grains and value added products Advance in packaging, different packaging materials, methods and machineries involved (Primary, Secondary and tertiary) in packaging of grains and their value-added products. Selection of packaging materials and standards for grains and their value added products. Recent packaging techniques to extend the shelf life of the Product, MAP, hermetic packaging, convenient intelligent and smart packaging.	4	2
Plant layout and maintenance for spices and plantation crops processing Introduction to food plant design - plant location - location factors, site selection - layout - objectives, classical and practical layout – preparation of process chart and machinery layout – product layout and process layout - Repair and maintenance of equipment – preventive and breakdown maintenance – replacement of equipment.	3	1
Platform Skills – 28 hr		
Food safety regulations & certification Need for testing of Food, notified NABL labs, Referral Labs and Reference Labs in India. GMP, GHP, GLP practices, Quality of Processed Grains as per the standards given in Food safety regulation on Standards in Section 2.4 (Cereal Products) and 2.4.6 (Food Grains), Safe storage temperature and Moisture content of Food Grains. HACCP implementation program. Regulations and standards for maintaining food safety and quality –BIS, FSSAI and International standards – FSSAI packaging and labelling requirements. FSSAI registration and licensing procedure.	8	4
Soft skills and Communication Importance of soft skills and communication -Networking skills–creative& innovative thinking – problem management – stress and emotional management – leadership and teaming up – Confidence building – entrepreneurs competencies – risk taking and goal settings - Effective communication skills.	10	6
Assessment by FICSI	4	-
Sub total	42	22
Total: 64 hr		

3.4 Fish and Marine Processing

Technical Aspects: Processing, Value addition, Supply Chain, Machinery, Packaging and Storage, Procurement, Product Development, Food safety regulations & certification.

Training Time: 64 hr/8 days (Online + Offline)

Technical aspects		
Training Syllabus	Time duration (hr)	
	Online / Offline	Demo/ Self-learning
Domain Skills – 32 hr		
Introduction Overview of PMFME scheme, guidelines, objectives, capacity building framework and its implementation. Status, market size and Scope of fish and marine food processing industry in India; Selection, Procurement and supply chain management of fish and marine food for processing industry.	3	2
Equipments and specifications of machineries in F&M processing Equipment involved in unit operations of Fish and Marine food processing. Specifications of machineries involved in fish and marine food processing. CIP: Cleaning & sanitization of processing equipment's: objectives, frequency, procedures, mechanical cleaning aspects, CIP system & program. Equipments used in fish processing Units- Cold Storage for processing and Preservation, Fish Cutting Machine -Fish -De -scaling machine, Solar drying unit.	4	3
Value addition of Fish and Marine General: Variety of fish and marine products available in the district: Handling and preservation - salt curing and smoking – drying of fish - freezing preservation - freezing methods– Block Frozen, IQF and cooked forms. Minced products - surimi process – fish meal- fish oil. Ready to Cook Frozen Products, Fish Protein Isolate- Fermented Fish Sauce- Waste and by-products utilization. ODOP: Beneficiaries/micro entrepreneurs will be trained on their district specific ODOP by DLTs. For example: Fish processing operations: receiving and quality checking – cleaning and scale removing – gutting / evisceration – washing – salting – processing – (cooking / oven drying / smoking / Frying).	6	4
Packaging of Fish and Marine Products Advance in packaging, different packaging materials, methods and machineries involved (Primary, Secondary and tertiary) in packaging of fish and marine products. Selection of packaging materials standards for fish and marine products. Recent packaging techniques to extend the shelf life of the Product-Aseptic packaging, convenient and smart packaging. Advances in storage of fish and marine products.	4	2
Plant layout and maintenance Introduction to food plant design - plant location - location factors, site selection - layout - objectives, classical and practical layout – preparation of process chart and machinery layout – product layout and process layout - Repair and maintenance of equipment – preventive and breakdown maintenance – replacement of equipment.	3	1
Platform Skills – 28 hr		
Food safety regulations & certification Need for testing of Food, notified NABL labs, Referral Labs and Reference Labs in India. GMP, GHP, GLP practices relevant to fish and marine food processing. HACCP implementation program. Regulations and standards for maintaining food safety and quality – FSSAI Regulation – 2.6.1 and International standards – FSSAI packaging and labelling requirements. FSSAI registration and licensing procedure.	8	4
Soft skills and Communication Importance of soft skills and communication -Networking skills–creative& innovative thinking – problem management – stress and emotional management – leadership and teaming up – Confidence building – entrepreneurs competencies – risk taking and goal settings - Effective communication skills.	10	6
Assessment by FICSI	4	-
Sub total	42	22
Total: 64 hr		

3.5 Meat and Poultry Processing

Technical Aspects: Processing, Value addition, Supply Chain, Machinery, Packaging and Storage, Procurement, Product Development, Food safety regulations & certification.

Training Time: 64 hr/8 days (Online + Offline)

Technical aspects		
Training Syllabus	Time duration (hr)	
	Online / Offline	Demo/ Self-learning
Domain Skills – 32 hr		
Introduction Overview of PMFME scheme, guidelines, objectives, capacity building framework and its implementation. Status, market size and Scope of Meat and poultry processing industry in India; Selection, Procurement and supply chain management of meat and poultry for processing industry.	3	2
Equipments and specifications of machineries in M&P processing Equipment involved in unit operations of Meat and Poultry processing. Specifications of machineries involved in meat and poultry processing. CIP: Cleaning & sanitization of processing equipment's: objectives, frequency, procedures, mechanical cleaning aspects, CIP system & program.	4	3
Value addition of Meat and Poultry General: Dried and smoked meat products. Comminuted meat products: sausages, semi dry sausages, dry sausages. Cured meat products. Restructured meat. Fried, Broiled, Roasted meat products. Braising and Stewing of meat products. Curries, bacon, ham, cutlet-mix, chicken-n-ham and salami. Egg powder production, uses of egg powder in bakery and confectionary, noodles and pasta, mayonnaise and salad dressings. Waste and by-products utilization. ODOP: Beneficiaries/micro entrepreneurs will be trained on their district specific ODOP by DLTs. For example: Processing line for poultry industry – shackling – stunning – bleeding – scalding – picking – evisceration – washing – chilling- cut bone deboning – cold storage.	6	4
Packaging of Meat and Poultry Products Advances in packaging, different packaging materials, methods and machineries involved (Primary, Secondary and tertiary) in packaging of meat and poultry products. Selection of packaging materials standards for meat and poultry products. Recent packaging techniques to extend the shelf life of the Product-Aseptic packaging, convenient and smart packaging. Advances in storage of meat and poultry products	4	2
Plant layout and maintenance Introduction to food plant design - plant location – location factors, site selection - layout - objectives, classical and practical layout – preparation of process chart and machinery layout – product layout and process layout – Modern Abattoirs – Repair and maintenance of equipment – preventive and breakdown maintenance – replacement of equipment. Implementation of HACCP Plan (PRP-OPRP- CCP) for Meat industry	3	1
Platform Skills – 28 hr		
Food safety regulations & certification Need for testing of Food, notified NABL labs, Referral Labs and Reference Labs in India. GMP, GHP, GLP practices relevant to meat and poultry processing. HACCP implementation program. Regulations and standards for maintaining food safety and quality – FSSAI (Regulation – 2.5.1 – 2.5.3) and International standards – FSSAI packaging and labelling requirements. FSSAI registration and licensing procedure.	8	4
Soft skills and Communication Importance of soft skills and communication -Networking skills–creative& innovative thinking – problem management – stress and emotional management – leadership and teaming up – Confidence building – entrepreneurs competencies – risk taking and goal settings - Effective communication skills.	10	6
Assessment by FICSI	4	-
Sub total	42	22
Total: 64 hr		

3.6 Bakery and Confectionery Products

Technical Aspects: Processing, Value addition, Supply Chain, Machinery, Packaging and Storage, Procurement, Product Development, Food safety regulations & certification.

Training Time: 64 hr/8 days (Online + Offline)

Technical aspects		
Training Syllabus	Time duration (hr)	
	Online / Offline	Demo/ Self-learning
Domain Skills – 32 hr		
Introduction Overview of PMFME scheme, guidelines, objectives, capacity building framework and its implementation. Status, market size and scope of bakery and confectionery industries in India- Raw materials for bakery and confectionery products specifications, compositions, role of raw materials - flour, types of flour, quality assessment of flour, sugar, shortenings, leavening agents, egg, salt, water, moistening agent, cocoa products, fruits, nuts, improvers, flavouring and colouring agents.	3	2
Equipments and specifications of machineries in Bakery and confectionery processing Identification and selection of bakery and confectionery equipments-weighing equipment- manual scale, Automatic weigh, liquid measuring. Mixing- blenders, horizontal and vertical planetary, continuous. Make up equipment, divider, rounder, proofer, moulder. Baking equipment – different oven, slicer. Confectionery products machines.	4	3
Value addition of Bakery and Confectionery products Bread making- methods- specification for various types of breads- Manufacturing process of biscuit, cookies- Crackers- Buns- preservation of bakery products. Frozen bakery products. Production of chocolate, fondant, caramels, fudge and toffee and Cakes and pastries ODOP: Beneficiaries/micro entrepreneurs will be trained on their district specific ODOP by DLTs. For example: Processing line for bread making: mixing of ingredients – dough mixing – kneading/rounding- proofing – baking – cooling – slicing – packing.	6	4
Packaging of Bakery Products Advance in packaging, different packaging materials, methods and machineries involved (Primary, Secondary and tertiary) in packaging of bakery products. Selection of packaging materials (flexible and Rigid packing). Recent packaging techniques to extend the shelf life of the products.	4	2
Plant layout and maintenance for bakery Product Processing Introduction to food plant design - plant location - location factors, site selection - layout - objectives, classical and practical layout – preparation of process chart and machinery layout – product layout and process layout - Repair and maintenance of equipment – preventive and breakdown maintenance – replacement of equipment.	3	1
Platform Skills –28 hr		
Food safety regulations & certification Need for testing of Food, notified NABL labs, Referral Labs and Reference Labs in India. GMP, GHP, GLP practices, HACCP implementation program. Regulations and standards for maintaining food safety and quality, Standards Fssai for Bakery Products 2.4.15 –BIS, FSSAI and International standards – FSSAI packaging and labelling requirements. FSSAI registration and licensing procedure.	8	4
Soft skills and Communication Importance of soft skills and communication -Networking skills–creative& innovative thinking – problem management – stress and emotional management – leadership and teaming up – Confidence building – entrepreneur’s competencies – risk taking and goal settings - Effective communication skills.	10	6
Assessment by FICSI	4	-
Sub total	42	22
Total: 64 hr		

3.7 Fat and oil seed processing

Technical Aspects: Processing, Value addition, Supply Chain, Machinery, Packaging and Storage, Procurement, Product Development, Food safety regulations & certification.

Training Time: 64 hr/8 days (Online + Offline)

Technical aspects	Time duration (hr)	
	Online / Offline	Demo/ Self-learning
Training Syllabus		
Domain Skills – 32 hr		
Introduction Overview of PMFME scheme, guidelines, objectives, capacity building framework and its implementation. Status, market size and Scope of fats and oil seed processing industry in India; Selection, Procurement and supply chain management of fats and oil seed for processing industry.	3	2
Equipments and specifications of machineries in fats and oil seed processing Equipment involved in unit operations of Fats and oil seed processing. Specifications of machineries involved in fats and oil seed processing. By product utilization Plant and value addition and market scope. Traditional Cold Press and Virgin oil Processing CIP: Cleaning & sanitization of processing equipment's: objectives, frequency, procedures, mechanical cleaning aspects, CIP system & program.	4	3
Value addition and Processing of fats and oil seeds Milk and animal fats: Production, characteristics, composition, processing and utilization of milk fats and butter, animal fats such as lard and tallow, fish and marine oils. General: Variety of Nuts and oil seeds available in the district: Edible oil sources: Coconut, palm, palm kernel, olive, cocoa butter, sunflower, safflower, sesame, groundnut, mustard, rapeseed, canola, soybean, linseed, castor, rice-bran and cottonseed. Processing of oils seeds and Refining of oil. By product utilization of oil milling industries. ODOP: Beneficiaries/micro entrepreneurs will be trained on their district specific ODOP by DLTs. For example: Oil processing line – selection of quality oil seeds- crushing – crude oil extraction – degumming – de-acidification – de-colorization – de-odorizing – refined edible oil.	6	4
Packaging of fats and oils Advance in packaging, requirements, different packaging materials, methods and machineries involved (Primary, Secondary and tertiary) in packaging of fats and edible oils. Selection of packaging materials standards for Fats and oils. Advances in storage of fats and oils. - changes during storage –rancidity – causes – atmospheric oxidation and enzyme action – free fatty acid – color.	4	2
Plant layout and maintenance Introduction to food plant design - plant location - location factors, site selection - layout - objectives, classical and practical layout – preparation of process chart and machinery layout – product layout and process layout - Repair and maintenance of equipment – preventive and breakdown maintenance – replacement of equipment. Waste Treatment Plant Operation Management, Safe disposal of Plant Waste.	3	1
Platform Skills – 28 hr		
Food safety regulations & certification Need for testing of Food, notified NABL labs, Referral Labs and Reference Labs in India. Concept of quality assurance and quality control in relation to fat and oil industry; quality management systems - ISO 9000; TQM, HACCP, GMP, GHP, GLP relevant to fat and oilseed processing; role of International organizations- ISO, IDF, CAC, AOAC and WTO, National organizations - BIS, Agmark; significance of oil and allied products order, FSSAI Standards (2.2.1 to 2.2.24) and APEDA in oil industry; guidelines for setting up quality control laboratory. Legislation on fats and oils, packaging laws and testing of packaged materials.	8	4
Soft skills and Communication Importance of soft skills and communication -Networking skills–creative & innovative thinking – problem management – stress and emotional management – leadership and teaming up – Confidence building – entrepreneurs competencies – risk taking and goal settings - Effective communication skills.	10	6
Assessment by FICSI	4	-
Sub total	42	22
Total: 64 hr		

3.8 Spices and Plantation crops processing

Technical Aspects: Processing, Value addition, Supply Chain, Machinery, Packaging and Storage, Procurement, Product Development, Food safety regulations & certification.

Training Time: 64 hr/8 days (Online + Offline)

Technical aspects	Time duration (hr)	
	Online / Offline	Demo/ Self-learning
Training Syllabus		
Domain Skills – 32 hr		
Introduction Overview of PMFME scheme, guidelines, objectives, capacity building framework and its implementation. Status, market size and Scope of spices and plantation crop processing industry in India; Selection, Procurement and supply chain management of spices and plantation crop for processing industry.	3	2
Equipments and specifications of machineries in spices and plantation crop processing Different unit operations pertaining to spices and plantation crops processing. Equipment involved in unit operations of different spices and plantation crop processing. Specifications of machineries involved in spices and plantation crop processing. CIP: Cleaning & sanitization of processing equipment's: objectives, frequency, procedures, mechanical cleaning aspects, CIP system & program.	4	3
Value addition of spices and plantation crops General: Variety of Spices and plantation crops available in the district: Spices: Extracts-Essential oils, oleoresin, flavor and natural color and pigments. Preparation of powders, dried spices and condiments, Curry mixes, Curry Paste, dehydrated products. Pepper- dehydrated green pepper, white pepper and canned pepper. Ginger- wine, ginger preserve. Turmeric – curcumin Processing. Chillies – brined chilli, pickle and sauce preparation. Waste and by-products utilization. Plantation crops: Coconut – processing of coconut milk, milk powder, coconut cream, coconut sugar, processed tender coconut water, Coconut Cream, coconut Vinegar, coconut oil extraction, virgin coconut oil, activated carbon and husk, coir dust, Organic fertilizer, Cashew – Nut processing, Cashew apple juice preparation. Cocoa – cocoa butter processing. ODOP: Beneficiaries/micro entrepreneurs will be trained on their district specific ODOP by DLTs. For example, Spice processing line – quality Check for all Raw materials – Sorting and Removal of foreign material – Washing – Drying – Weighing - Roasting – cooling – Pulverizing – Blending – packing. Cashew processing – Dehydration of Cashew Seeds – Steam Roasting – Shell Cutting – Peeling – Grading – Packing.	6	4
Packaging of spices and plantation crop Products Advance in packaging, different packaging materials, methods and machineries involved (Primary, Secondary and tertiary) in packaging of spices and plantation crop and their value-added products. Selection of packaging materials and standards for spices and plantation crop products. Recent packaging techniques to extend the shelf life of the Product such as oil, oleoresin, coconut milk, preserve and juices. Technologies - Aseptic packaging, tetra pack, MAP, hermetic packaging, convenient intelligent and smart packaging. Advances in storage of spices and plantation crops.	4	2
Plant layout and maintenance for spices and plantation crops processing Introduction to food plant design - plant location - location factors, site selection - layout - objectives, classical and practical layout – preparation of process chart and machinery layout – product layout and process layout - Repair and maintenance of equipment – preventive and breakdown maintenance – replacement of equipment.	3	1
Platform Skills – 28 hr		
Food safety regulations & certification Need for testing of Food, notified NABL labs, Referral Labs and Reference Labs in India. GMP, GHP, GLP practices, ASTA standards for clean spices and CODEX national and international standards relevant to Black pepper, cardamom, turmeric, ginger, tamarind, curry leaf and coriander in spices and tea, coffee, cocoa, cashew, rubber in plantation crops. HACCP implementation program. Regulations and standards for maintaining food safety and quality –BIS, FSSAI Standards (Spices 2.9 – Tea and Coffee- 2.10) and International standards – FSSAI packaging and labelling requirements. FSSAI registration and licensing procedure.	8	4
Soft skills and Communication Importance of soft skills and communication -Networking skills–creative& innovative thinking – problem management – stress and emotional management – leadership and teaming up – Confidence building – entrepreneur's competencies – risk taking and goal settings - Effective communication skills.	10	6
Assessment by FICSI	4	-
Sub total	42	22
Total: 64 hr		

3.9 Minor Forest Produce Processing

Technical Aspects: Processing, Value addition, Trading, Machinery, Packaging and Storage, Procurement, Food safety regulations & certification.

Training Time: 68 hr/8 days (Online + Offline)

Technical aspects		
Training Syllabus	Time duration (hr)	
	Online / Offline	Demo/ Self-learning
Domain Skills – 32 hr		
Introduction Overview of PMFME scheme, guidelines, objectives, capacity building framework and its implementation. Status and Scope of minor forest produce (MFP); Types of minor forest produce under different categories – medicinal, essential oils. Edible wild plants, gums, resins, natural coloring materials, Exotic Spices (king chili) etc.	3	2
Equipments and specifications of machineries in Minor Forest Produce Equipment involved in collection of minor forest produce. Specifications of machineries involved in processing of different minor forest produce. CIP: Cleaning & sanitization of processing equipment's: objectives, frequency, procedures, mechanical cleaning aspects, CIP system & program.	4	3
Value addition of Minor Forest Produce General: Variety of Honey, mushroom and other forest produce available in the district: Sugar conserves: Jams, jellies, toffee. Beverages: Juices, squashes, syrups, nectars, RTS. Preparation of concentrates-puree, soup, and paste. Preparation of pickles, and chutneys. Medicinal & aromatic products. Traditional Herbals –Preparation of Herbal Tea, Wild Honey – Preparation of herbal infused honey- garlic honey, Cinnamon Honey. ODOP: Beneficiaries/micro entrepreneurs will be trained on their district specific ODOP by DLTs. For example: Flavored Honey Processing: Raw honey – screening – filtering – addition of herbs/ spices - pasteurization – cooling – filling – packing – storing – labeling – branding.	6	4
Packaging of Minor Forest Products Different packaging materials, methods and machineries involved (Primary, Secondary and tertiary) in packaging of MFP & their value added products. Selection of packaging materials standards for minor forest produce. Recent packaging techniques to extend the shelf life of the Product. Storage of value added products from minor forest produce.	4	2
Collection & Trading of Minor Forest Produce Significance in tribal economy–Sustainable cultivation &Collection Methods, Mechanism of Marketing of Minor Forest Produce – Minimum support price- Promotion	3	1
Platform Skills – 28 hr		
Food safety regulations & certification Need for testing of Food, notified NABL labs, Referral Labs and Reference Labs in India. GMP, GHP, GLP practices relevant to minor forest produce. Indian forest Act, Status of certification of Non Timber Forest Products (NFTP). FSSAI registration and licensing procedure.	8	4
Soft skills and Communication Importance of soft skills and communication -Networking skills–creative& innovative thinking – problem management – stress and emotional management – leadership and teaming up – Confidence building – entrepreneur's competencies – risk taking and goal settings - Effective communication skills. New Market Platforms – Online Marketing,	10	6
Assessment by FICSI	4	-
Sub total	42	22
Total: 64 hr		



Syllabus for Training of Existing Trainers (ToTs) under PMFME Scheme



4.1 Fruits and Vegetable Processing

Technical Aspects: Processing, Value addition, Supply Chain, Machinery, Packaging and Storage, Procurement, Product Development, Food safety regulations & certification.

Training Time: 16 hr/2 days (Online + Offline)

Technical aspects		
Training Syllabus	Time duration (hr)	
	Online / Offline	Demo/ Self-learning
Domain Skills – 8 hr		
Introduction Overview of PMFME scheme, guidelines	1	0
ODOP Specific Value addition of Fruits and Vegetables General: Variety of fruit and Vegetable available in the district: Sugar conserves: Jams, jellies, marmalades. Beverages: Juices (carbonated and non-carbonated), squashes, syrups, nectars, RTS, crushes, cordial, fruit wine. Preparation of concentrates-puree, sauces, ketchups, soup, and paste. Preparation of pickles, and chutneys. Waste and by-products utilization: pomace utilization, extraction and product developments from F&V wastes. ODOP: Beneficiaries/micro entrepreneurs will be trained on their district specific ODOP by DLTs based on above generalized F&V value addition. For example: Guava juice processing – sorting –washing – juice extraction – clarification of juice – fortification – homogenization – pasteurization – bottling – branding.	4	3
Platform Skills – 4 hr		
Food safety regulations & certification Need for testing of Food, notified NABL labs, Referral Labs and Reference Labs in India. GMP, GHP, GLP practices relevant to fruits and vegetable processing. HACCP implementation program. Regulations and standards for maintaining food safety and quality - FSSAI and International standards – FSSAI packaging and labelling requirements. FSSAI registration and licensing procedure.	2	0
Soft skills and Communication Importance of soft skills and communication - Networking skills–Idea generation, creative & innovative thinking – problem management – stress and emotional management – leadership and teaming up – Confidence building – entrepreneurs competencies – risk taking and goal settings - Effective communication skills- Knowledge on UPI and digital transaction.	2	0
Assessment by FICSI	4	
Sub total	13	3
Total: 16 hr		

4.2 Dairy Processing

Technical Aspects: Processing, Value addition, Supply Chain, Machinery, Packaging and Storage, Procurement, Product Development, Food safety regulations & certification.

Training Time: 16 hr/2days (Online + Offline)

Technical aspects		
Training Syllabus	Time duration (hr)	
	Online / Offline	Demo/ Self-learning
Domain Skills – 8 hr		
Introduction Overview of PMFME scheme, guidelines	1	0
ODOP Specific Processing and value addition of Milk General: Processing of fluid milk- Chilling, standardization, homogenization, pasteurization, cream separation, and packing. Sensitization about types of processed fluid milk- standardized milk, toned, double toned and skimmed milk. Aseptic processing of milk. Manufacturing of Milk products- principle and procedures for preparation of curd, cream, butter, ghee, condensed milk, dried milk/milk products, ice-cream, khoa, paneer, cheese, buttermilk, skimmed milk powder, traditional Indian dairy products, novel isolated milk components – whey protein isolates, hydrolyzed whey protein, casein, lactose waste and byproducts utilization. ODOP: Beneficiaries/micro entrepreneurs will be trained on their district specific ODOP by DLTs. For example: Ice cream – blending – batch pasteurization – homogenization – addition of color and flavor – ageing – cooling – homogenization- batch freezing –packing – hardening.	4	3
Platform Skills – 4 hr		
Food safety regulations & certification Need for testing of Food, notified NABL labs, Referral Labs and Reference Labs in India. GMP, GHP, GLP practices relevant to dairy processing. HACCP implementation program. Regulations and standards for maintaining food safety and quality - FSSAI and International standards – FSSAI packaging and labelling requirements. FSSAI registration and licensing procedure – Instant Adulteration Test Procedures and Safe Microbial load of Unprocessed milk.	2	0
Soft skills and Communication Importance of soft skills and communication -Networking skills–creative& innovative thinking – problem management – stress and emotional management – leadership and teaming up – confidence building – entrepreneur’s competencies – risk taking and goal settings - effective communication skills.	2	0
Assessment by FICSI	4	-
Sub total	13	3
Total: 16 hr		

4.3 Grain processing

Technical Aspects: Processing, Value addition, Supply Chain, Machinery, Packaging and Storage, Procurement, Product Development, Food safety regulations & certification.

Training Time: 16 hr/2 days (Online + Offline)

Technical aspects		
Training Syllabus	Time duration (hr)	
	Online / Offline	Demo/ Self-learning
Domain Skills – 8 hr		
Introduction: Overview of PMFME scheme, guidelines,	1	0
ODOP Specific Processing and value addition of Grains General: Variety of food grains available in the district: Corn processing: Production corn flour-wet milling and dry milling method, corn pops and quality evaluation of popped corn. Preparation corn syrup. Paddy processing: Parboiling and milling of paddy, aging of rice, Rice enrichment, Processed rice products. Pulse milling: Pre-treatment in dal milling like cleaning, grading, soaking, and drying. Milling pulses for production of dal, e.g. pigeon pea, green gram, Bengal gram. ODOP: Beneficiaries/micro entrepreneurs will be trained on their district specific ODOP by DLTs. For example: Cereal-Based Snack Foods- and breakfast cereals Pasta and Noodle Products. Preparation of expanded & puffed rice from raw and parboiled materials. Extruded products	4	3
Platform Skills – 4 hr		
Food safety regulations & certification Need for testing of Food, notified NABL labs, Referral Labs and Reference Labs in India. GMP, GHP, GLP practices, Quality of Processed Grains as per the standards given in Food safety regulation on Standards in Section 2.4 (Cereal Products) and 2.4.6 (Food Grains), Safe storage temperature and Moisture content of Food Grains. HACCP implementation program. Regulations and standards for maintaining food safety and quality –BIS, FSSAI and International standards – FSSAI packaging and labelling requirements. FSSAI registration and licensing procedure.	2	0
Soft skills and Communication Importance of soft skills and communication -Networking skills-creative & innovative thinking – problem management – stress and emotional management – leadership and teaming up – Confidence building – entrepreneurs competencies – risk taking and goal settings - Effective communication skills.	2	0
Assessment by FICSI	4	-
Sub total	13	3
Total: 16 hr		

4.4 Fish and Marine Processing

Technical Aspects: Processing, Value addition, Supply Chain, Machinery, Packaging and Storage, Procurement, Product Development, Food safety regulations & certification.

Training Time: 16 hr/2days (Online + Offline)

Technical aspects		
Training Syllabus	Time duration (hr)	
	Online / Offline	Demo/ Self-learning
Domain Skills –8 hr		
Introduction Overview of PMFME scheme, guidelines.	1	0
Value addition of Fish and Marine General: Variety of fish and marine products available in the district: Handling and preservation - salt curing and smoking – drying of fish - freezing preservation - freezing methods– Block Frozen, IQF and cooked forms. Minced products - surimi process – fish meal- fish oil. Ready to Cook Frozen Products, Fish Protein Isolate- Fermented Fish Sauce- Waste and byproducts utilization. ODOP: Beneficiaries/micro entrepreneurs will be trained on their district specific ODOP by DLTs. For example: Fish processing operations: receiving and quality checking – cleaning and scale removing – gutting / evisceration – washing – salting – processing – (cooking / oven drying / smoking / Frying).	4	3
Platform Skills – 4 hr		
Food safety regulations & certification Need for testing of Food, notified NABL labs, Referral Labs and Reference Labs in India. GMP, GHP, GLP practices relevant to fish and marine food processing. HACCP implementation program. Regulations and standards for maintaining food safety and quality – FSSAI Regulation – 2.6.1 and International standards – FSSAI packaging and labelling requirements. FSSAI registration and licensing procedure.	2	0
Soft skills and Communication Importance of soft skills and communication -Networking skills–creative& innovative thinking – problem management – stress and emotional management – leadership and teaming up – Confidence building – entrepreneurs competencies – risk taking and goal settings - Effective communication skills.	2	0
Assessment by FICSI	4	-
Sub total	13	3
Total: 16 hr		

4.5 Meat and Poultry Processing

Technical Aspects: Processing, Value addition, Supply Chain, Machinery, Packaging and Storage, Procurement, Product Development, Food safety regulations & certification.

Training Time: 16 hr/2days (Online + Offline)

Technical aspects		
Training Syllabus	Time duration (hr)	
	Online / Offline	Demo/ Self-learning
Domain Skills – 8 hr		
Introduction Overview of PMFME scheme, guidelines	1	0
Value addition of Meat and Poultry General: Dried and smoked meat products. Comminuted meat products: sausages, semi dry sausages, dry sausages. Cured meat products. Restructured meat. Fried, Broiled, Roasted meat products. Braising and Stewing of meat products. Curries, bacon, ham, cutlet-mix, chicken-n-ham and salami. Egg powder production, uses of egg powder in bakery and confectionary, noodles and pasta, mayonnaise and salad dressings. Waste and byproducts utilization. ODOP: Beneficiaries/micro entrepreneurs will be trained on their district specific ODOP by DLTs. For example: Processing line for poultry industry – shackling – stunning – bleeding – scalding – picking – evisceration – washing – chilling- cut bone deboning – cold storage.	4	3
Platform Skills – 4 hr		
Food safety regulations & certification Need for testing of Food, notified NABL labs, Referral Labs and Reference Labs in India. GMP, GHP, GLP practices relevant to meat and poultry processing. HACCP implementation program. Regulations and standards for maintaining food safety and quality – FSSAI (Regulation – 2.5.1 – 2.5.3) and International standards – FSSAI packaging and labelling requirements. FSSAI registration and licensing procedure.	2	0
Soft skills and Communication Importance of soft skills and communication -Networking skills-creative& innovative thinking – problem management – stress and emotional management – leadership and teaming up – Confidence building – entrepreneurs competencies – risk taking and goal settings - Effective communication skills.	2	0
Assessment by FICSI	4	-
Sub total	13	3
Total: 16 hr		

4.6 Bakery and Confectionery Processing

Technical Aspects: Processing, Value addition, Supply Chain, Machinery, Packaging and Storage, Procurement, Product Development, Food safety regulations & certification.

Training Time: 16 hr/2 days (Online + Offline)

Technical aspects		
Training Syllabus	Time duration (hr)	
	Online / Offline	Demo/ Self-learning
Domain Skills – 8 hr		
Introduction Overview of PMFME scheme, guidelines.	1	0
Value addition of Bakery and Confectionery products Bread making- methods- specification for various types of breads- Manufacturing process of biscuit, cookies- Crackers- Buns- preservation of bakery products. Frozen bakery products. Production of chocolate, fondant, caramels, fudge and toffee and Cakes and pastries ODOP: Beneficiaries/micro entrepreneurs will be trained on their district specific ODOP by DLTs. For example: Processing line for bread making: mixing of ingredients – dough mixing – kneading/rounding- proofing – baking – cooling – slicing – packing.	4	3
Platform Skills –4 hr		
Food safety regulations & certification Need for testing of Food, notified NABL labs, Referral Labs and Reference Labs in India. GMP, GHP, GLP practices, HACCP implementation program. Regulations and standards for maintaining food safety and quality, Standards Fssai for Bakery Products 2.4.15 –BIS, FSSAI and International standards – FSSAI packaging and labelling requirements. FSSAI registration and licensing procedure.	2	0
Soft skills and Communication Importance of soft skills and communication -Networking skills–creative& innovative thinking – problem management – stress and emotional management – leadership and teaming up – Confidence building – entrepreneur’s competencies – risk taking and goal settings - Effective communication skills.	2	0
Assessment by FICSI	4	-
Sub total	13	3
Total: 16 hr		

4.7 Fat and oil seed processing

Technical Aspects: Processing, Value addition, Supply Chain, Machinery, Packaging and Storage, Procurement, Product Development, Food safety regulations & certification.

Training Time: 16 hr/2 days (Online + Offline)

Technical aspects		
Training Syllabus	Time duration (hr)	
	Online / Offline	Demo/ Self-learning
Domain Skills – 8 hr		
Introduction Overview of PMFME scheme, guidelines	1	0
Value addition and Processing of fats and oil seeds Milk and animal fats: Production, characteristics, composition, processing and utilization of milk fats and butter, animal fats such as lard and tallow, fish and marine oils. General: Variety of Nuts and oil seeds available in the district: Edible oil sources: Coconut, palm, palm kernel, olive, cocoa butter, sunflower, safflower, sesame, groundnut, mustard, rapeseed, canola, soybean, linseed, castor, rice-bran and cottonseed. Processing of oils seeds and Refining of oil. By product utilization of oil milling industries. ODOP: Beneficiaries/micro entrepreneurs will be trained on their district specific ODOP by DLTs. For example: Oil processing line – selection of quality oil seeds- crushing – crude oil extraction – degumming – de-acidification – de-colorization – de-odorizing – refined edible oil.	4	3
Platform Skills – 4 hr		
Food safety regulations & certification Need for testing of Food, notified NABL labs, Referral Labs and Reference Labs in India. Concept of quality assurance and quality control in relation to fat and oil industry; quality management systems - ISO 9000; TQM, HACCP, GMP, GHP, GLP relevant to fat and oilseed processing; role of International organizations- ISO, IDF, CAC, AOAC and WTO, National organizations - BIS, Agmark; significance of oil and allied products order, FSSAI Standards (2.2.1 to 2.2.24) and APEDA in oil industry; guidelines for setting up quality control laboratory. Legislation on fats and oils, packaging laws and testing of packaged materials.	2	0
Soft skills and Communication Importance of soft skills and communication -Networking skills-creative& innovative thinking – problem management – stress and emotional management – leadership and teaming up – Confidence building – entrepreneur’s competencies – risk taking and goal settings - Effective communication skills.	2	0
Assessment by FICSI	4	-
Sub total	13	3
Total: 16 hr		

4.8 Spices and Plantation crops processing

Technical Aspects: Processing, Value addition, Supply Chain, Machinery, Packaging and Storage, Procurement, Product Development, Food safety regulations & certification.

Training Time: 16 hr/2 days (Online + Offline)

Technical aspects		
Training Syllabus	Time duration (hr)	
	Online / Offline	Demo/ Self-learning
Domain Skills – 8 hr		
Introduction Overview of PMFME scheme, guidelines.	1	0
Value addition of spices and plantation crops General: Variety of Spices and plantation crops available in the district: Spices: Extracts-Essential oils, oleoresin, flavor and natural color and pigments. Preparation of powders, dried spices and condiments, Curry mixes, Curry Paste, dehydrated products. Pepper- dehydrated green pepper, white pepper and canned pepper. Ginger- wine, ginger preserve. Turmeric – curcumin Processing. Chillies – brined chilli, pickle and sauce preparation. Waste and byproducts utilization. Plantation crops: Coconut – processing of coconut milk, milk powder, coconut cream, coconut sugar, processed tender coconut water, Coconut Cream, coconut Vinegar, coconut oil extraction, virgin coconut oil, activated carbon and husk, coir dust, Organic fertilizer, Cashew – Nut processing, Cashew apple juice preparation. Cocoa – cocoa butter processing. ODOP: Beneficiaries/micro entrepreneurs will be trained on their district specific ODOP by DLTs. For example, Spice processing line – quality Check for all Raw materials – Sorting and Removal of foreign material – Washing – Drying – Weighing - Roasting – cooling – Pulverizing – Blending – packing. Cashew processing – Dehydration of Cashew Seeds – Steam Roasting – Shell Cutting – Peeling – Grading – Packing.	4	3
Platform Skills – 4 hr		
Food safety regulations & certification Need for testing of Food, notified NABL labs, Referral Labs and Reference Labs in India. GMP, GHP, GLP practices, ASTA standards for clean spices and CODEX national and international standards relevant to Black pepper, cardamom, turmeric, ginger, tamarind, curry leaf and coriander in spices and tea, coffee, cocoa, cashew, rubber in plantation crops. HACCP implementation program. Regulations and standards for maintaining food safety and quality –BIS, FSSAI Standards (Spices 2.9 – Tea and Coffee- 2.10) and International standards – FSSAI packaging and labelling requirements. FSSAI registration and licensing procedure.	2	0
Soft skills and Communication Importance of soft skills and communication -Networking skills–creative& innovative thinking – problem management – stress and emotional management – leadership and teaming up – Confidence building – entrepreneur’s competencies – risk taking and goal settings - Effective communication skills.	2	0
Assessment by FICSI	4	-
Sub total	13	3
Total: 16 hr		

4.9 Minor Forest Produce Processing

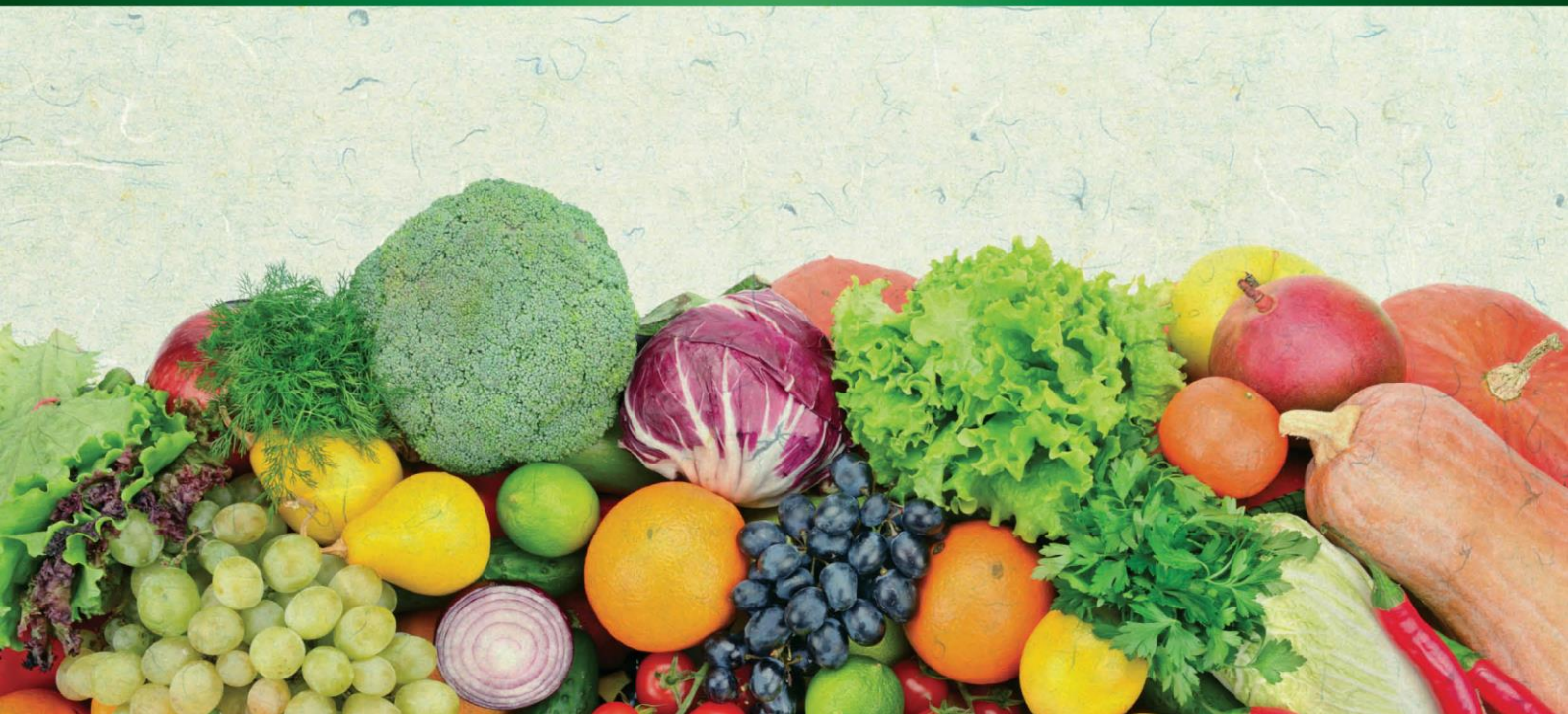
Technical Aspects: Processing, Value addition, Trading, Machinery, Packaging and Storage, Procurement, Food safety regulations & certification.

Training Time: 16 hr/2days (Online + Offline)

Technical aspects		
Training Syllabus	Time duration (hr)	
	Online / Offline	Demo/ Self-learning
Domain Skills – 8 hr		
Introduction Overview of PMFME scheme, guidelines.	1	0
Value addition of Minor Forest Produce General: Variety of Honey, mushroom and other forest produce available in the district: Sugar conserves: Jams, jellies, toffee. Beverages: Juices, squashes, syrups, nectars, RTS. Preparation of concentrates-puree, soup, and paste. Preparation of pickles, and chutneys. Medicinal & aromatic products. Traditional Herbals –Preparation of Herbal Tea, Wild Honey – Preparation of herbal infused honey- garlic honey, Cinnamon Honey. ODOP: Beneficiaries/micro entrepreneurs will be trained on their district specific ODOP by DLTs. For example: Flavored Honey Processing: Raw honey – screening – filtering – addition of herbs/ spices - pasteurization – cooling – filling – packing – storing – labeling – branding.	4	3
Platform Skills –4 hr		
Food safety regulations & certification Need for testing of Food, notified NABL labs, Referral Labs and Reference Labs in India. GMP, GHP, GLP practices relevant to minor forest produce. Indian forest Act, Status of certification of Non Timber Forest Products (NFTP). FSSAI registration and licensing procedure.	2	0
Soft skills and Communication Importance of soft skills and communication -Networking skills-creative& innovative thinking – problem management – stress and emotional management – leadership and teaming up – Confidence building – entrepreneur’s competencies – risk taking and goal settings - Effective communication skills. New Market Platforms – Online Marketing,	2	0
Assessment by FICSI	4	
Sub total	13	3
Total: 16 hr		



**EDP Training Syllabus for
Training of New Trainers (ToTs)
under PMFME Scheme**



335328/2021/FME **FDP TRAINING CURRICULUM FOR TRAINING OF TRAINERS (NEW TRAINERS)
UNDER PMFME SCHEME**

COMPONENT 1: DOMAIN SKILLS

CURRICULUM:

Time allotted: 32 hours spread over 4 days

Module	Topic	Learning objective	Learning outcome	Duration
Day – 1				
1	Entrepreneurship & its features Business Opportunity Identification	Benefits of entrepreneurship, key personal attributes, Concept of ideation Sources of new ideas Recognizing Entrepreneurial Opportunities Choosing a right business	Learn about the value proposition of entrepreneurship. Ability to identify gaps in the market, understand competition	3 hours
2	Conducting market survey & preparing a feasibility report	Tools, Techniques and guidelines for a market survey & how to evaluate feasibility of product/ services	Learn about conducting Market Survey and Product Feasibility Studies through various techniques	3 hours
3	Legal Aspects of Business and Creation of enterprise	Types of business organizations- Characteristics and legal formation Incorporating a proprietorship, partnership, Limited Liability Partnership and private/public limited companies,	Learn about various forms of organization and regulatory compliances for a new business	2 hours
Day – 2				
1	IPR issues for entrepreneurs	Different forms of Intellectual Property Rights (IPRs) pertaining to entrepreneurs including patents, copyrights, trademarks, geographical indications.	Learn about various types of IPRs and their significance	3 hours
2	Legal compliances for Business	MSME, GST registration, Tax compliances, Invoices and Orders, Legal modalities, Bank accounts	Learn about legal basic compliances for new businesses.	3 hours
3	Digital Media	Digital Marketing platforms, Significance of digital media and marketing techniques	Learn about digital marketing and social media marketing strategies	2 hours
Day – 3				
1	Marketing and branding	Marketing Concept, Ps of marketing, STP, Branding	Learn how to market products – components of marketing, Branding- importance and process	3 hours
2	Product Development	New Product Development, Product data and life cycle management	Learn about New Product development process and product life cycle.	3 hours
3	Case and/or Success stories	Case and/or Success stories related to micro enterprises/SHGs/FPOs/ FPCs and farmer cooperatives (in Indian Context)	Learnings from real life cases	2 hours
Day – 4				
1	Financial Aspects of Business	Understanding Financial statements	Learn about importance of preparing financial statements, the Income Statement and Balance Sheet components.	3 hours
2	DPR Essentials and Availing Bank Credit	Significance and contents of DPR, Bank Credit Basics	Learn About importance of preparing a DPR, key ratios in DPR and credit facilities available at Banks	3 hours
3	Hygiene, FSSAI standards, Weights & Measures Regulation and Registration etc. and issues specific to food processing sector.	GMP, GHP, FSSAI standards and registration, PRP, OPRP, CCP, Weights & Measures and validation for the same. Cases on trending issues in food processing sector	Awareness about the schedule 4 and other relevant regulations of FSSAI	2 hours

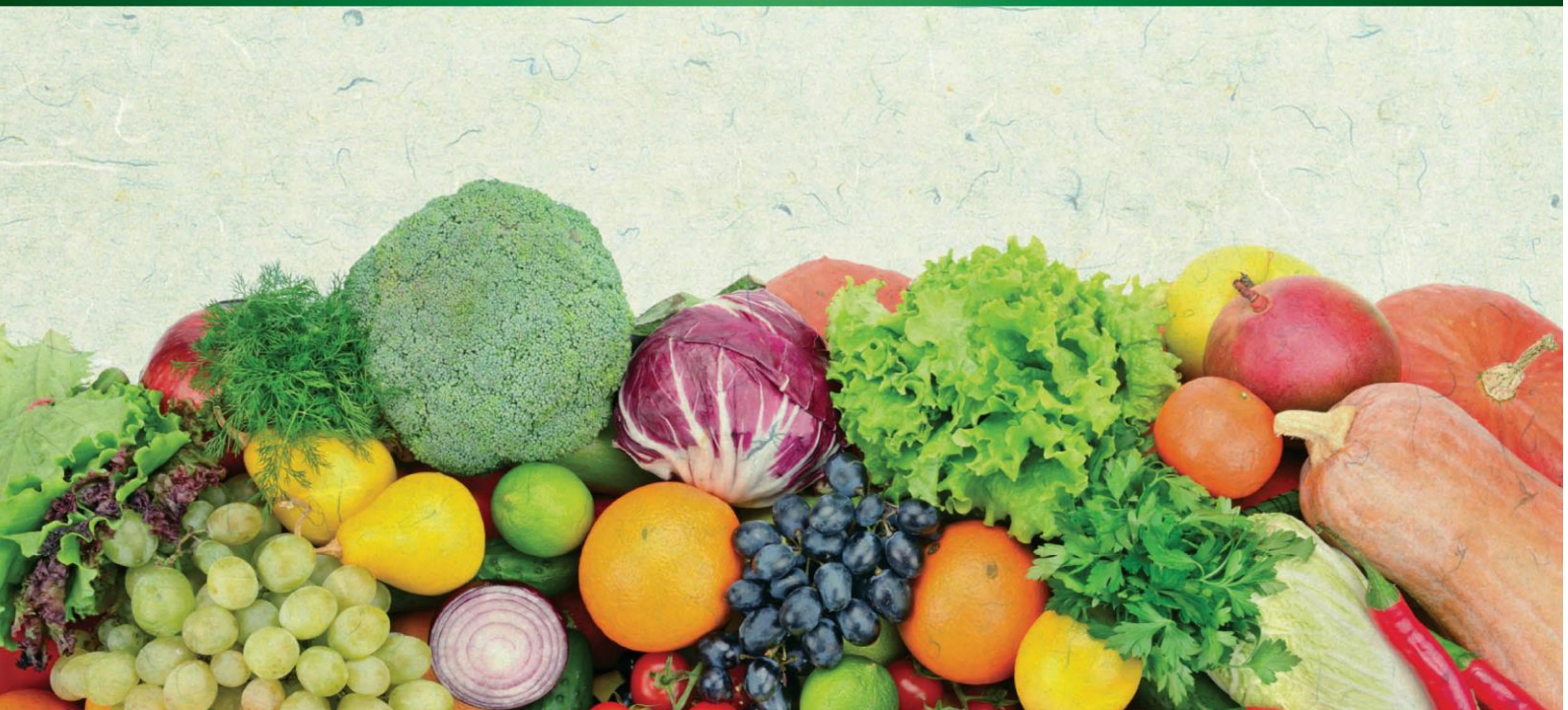
COMPONENT 2: PLATFORM SKILLS

Time allotted: 32 hours

Session	Topic	Lecture	Activity	Duration
1	Facilitating learning of work skills on-the-job or in a simulated work environment.	<ul style="list-style-type: none"> Professional skill development using G Suite tools. Personal and professional advancement. 	<p>Performance and efficiency enhancement activity</p> <p>Personal advancement form.</p> <p>Survey: Plan to enhance performance and efficiency</p> <p>Group Discussion</p>	8 hours per session
2	Training Methodology	<ul style="list-style-type: none"> Champion Task Execute the learnings to trainings. 7 Habits of Great Trainers 	<p>Read the article and mention how you plan to put into practice each of the Habit mentioned</p>	
3	<p>Evaluation of Training and learning outcomes</p> <p>Undertaking assessment of competence as per required standards</p>	<ul style="list-style-type: none"> Golden Badge Task Techniques for assessment Validation & Reliability Common Mistakes in Skill Training Survey: Six principles in the video to manage oneself 	<p>Prepare own training calendar using google calendar and take a screenshot of your calendar. Upload the picture of your calendar on Workplace Group.</p>	
4	Role of Technology in training and Analytics Delivering competency based, instructor-led training sessions as per session plan	<ul style="list-style-type: none"> Demonstrating work skills on-the-job or in a simulated work environment. 		



**EDP Training Syllabus for
Training of Existing Trainers (ToTs)
under PMFME Scheme**



COMPONENT 1: DOMAIN SKILLS

CURRICULUM:

Time allotted: 8 hours

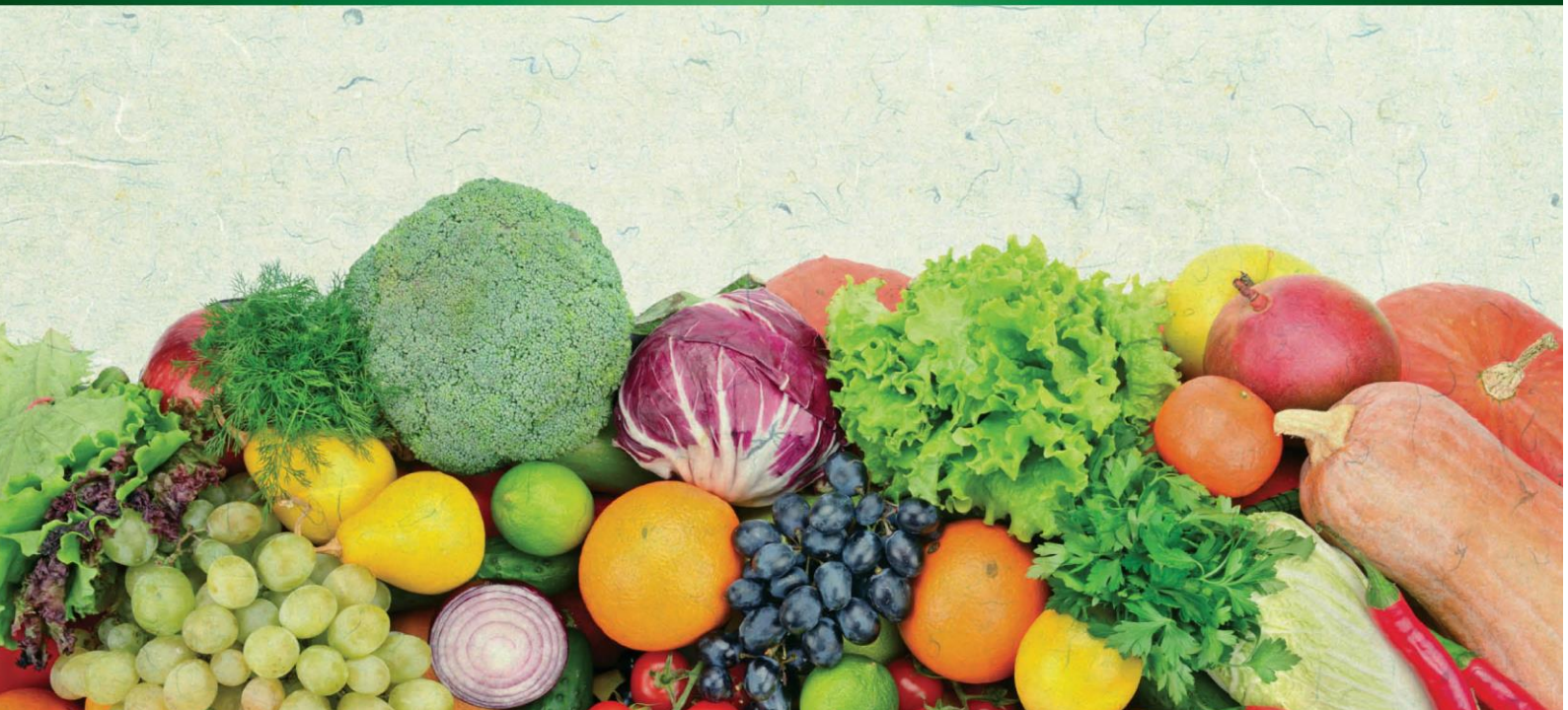
Module	Topic	Learning objective	Learning outcome	Duration
Day – 1				
1	Entrepreneurship & its features Business Opportunity Identification	Benefits of entrepreneurship, key personal attributes, Concept of ideation Sources of new ideas Recognizing Entrepreneurial Opportunities Choosing a right business	Learn about the value proposition of entrepreneurship. Ability to identify gaps in the market, understand competition	45 min
2	Conducting market survey & preparing a feasibility report	Tools, Techniques and guidelines for a market survey & how to evaluate feasibility of product/ services	Learn about conducting Market Survey and Product Feasibility Studies through various techniques	45 min
3	Legal Aspects of Business and Creation of enterprise	Types of business organizations- Characteristics and legal formation Incorporating a proprietorship, partnership, Limited Liability Partnership and private/public limited companies,	Learn about various forms of organization and regulatory compliances for a new business	30 min
4	IPR issues for entrepreneurs	Different forms of Intellectual Property Rights (IPRs) pertaining to entrepreneurs including patents, copyrights, trademarks, geographical indications.	Learn about various types of IPRs and their significance	45 min
5	Legal compliances for Business	MSME, GST registration, Tax compliances, Invoices and Orders, Legal modalities, Bank accounts	Learn about legal basic compliances for new businesses.	45 min
6	Digital Media	Digital Marketing platforms, Significance of digital media and marketing techniques	Learn about digital marketing and social media marketing strategies	30 min
7	Marketing and branding	Marketing Concept, Ps of marketing, STP, Branding	Learn how to market products – components of marketing, Branding- importance and process	45 min
8	Product Development	New Product Development, Product data and life cycle management	Learn about New Product development process and product life cycle.	45 min
9	Financial Aspects of Business	Understanding Financial statements	Learn about importance of preparing financial statements, the Income Statement and Balance Sheet components.	45 min
10	DPR Essentials and Availing Bank Credit	Significance and contents of DPR, Bank Credit Basics	Learn About importance of preparing a DPR, key ratios in DPR and credit facilities available at Banks	45 min
11	Case and/or Success stories	Case and/or Success stories related to micro enterprises/SHGs/FPOs/ FPCs and farmer cooperatives (in Indian Context)	Learnings from real life cases	30 min
12	Hygiene, FSSAI standards, Weights & Measures Regulation and Registration etc. and issues specific to food processing sector.	GMP, GHP, FSSAI standards and registration, PRP, OPRP, CCP, Weights & Measures and validation for the same. Cases on trending issues in food processing sector	Awareness about the schedule 4 and other relevant regulations of FSSAI	30 min

COMPONENT 2: PLATFORM SKILLS**Time allotted: 8 hours**

Session	Topic	Lecture	Activity	Duration
1	Facilitating learning of work skills on-the-job or in a simulated work environment.	<ul style="list-style-type: none"> Professional skill development using G Suite tools. Personal and professional advancement. 	<p>Performance and efficiency enhancement activity</p> <p>Personal advancement form.</p> <p>Survey: Plan to enhance performance and efficiency</p> <p>Group Discussion</p>	2 hours per session
2	Training Methodology	<ul style="list-style-type: none"> Champion Task Execute the learnings to trainings. 7 Habits of Great Trainers 	<p>Read the article and mention how you plan to put into practice each of the Habit mentioned</p>	
3	Evaluation of Training and learning outcomes	<ul style="list-style-type: none"> Golden Badge Task Techniques for assessment Validation & Reliability Common Mistakes in Skill Training Survey: Six principles in the video to manage oneself 	<p>Prepare own training calendar using google calendar and take a screenshot of your calendar. Upload the picture of your calendar on Workplace Group.</p>	
4	Undertaking assessment of competence as per required standards			
	Role of Technology in training and Analytics Delivering competency based, instructor-led training sessions as per session plan	<ul style="list-style-type: none"> Demonstrating work skills on-the-job or in a simulated work environment. 		



**Syllabus for Training of
New and Existing Beneficiaries Category 1 under PMFME
Scheme**



335328/2021/PMFME Training of Beneficiary Category 1 (ToBs) Syllabus – Food Domain and EDP for (New and Existing Entrepreneurs)

7.1 Fruits and Vegetable Processing

Technical Aspects: Processing, Value addition, Supply Chain, Machinery, Packaging and Storage, Procurement, Product Development, Food safety regulations & certification.

Training Time: 50 hr/ days (Online + Offline)

Technical aspects		
Training Syllabus	Time duration (hr)	
	Online / Offline	Demo/ Self-learning
Domain Skills – 29 hr		
Introduction Overview of PMFME scheme, guidelines, objectives, capacity building framework and its implementation. Status, market size and scope of fruit and vegetable processing industry in India; Selection, procurement and supply chain management of fruits and vegetables specific to ODOP for processing industry; Imparting skills on various equipment's used for primary processing, cleaning, washing, sorting and handling, and its maintenance and precautions.	2	0
Plant layout and maintenance Introduction to food plant design - plant location - location factors, site selection- layout -repair and maintenance of equipment – preventive and breakdown maintenance – replacement of equipment. Equipment and specifications of machineries in F&V processing Various methods of fruit and vegetable preservation Specific to ODOP: Minimal processing, Equipment and specification involved in unit operations of fruits and vegetables. Cleaning & sanitization of processing equipment.	3	1
Value addition (It can be modified to specific ODOP by the DLT'S) Tomato as example is given below: List of value-added products can be made out of tomato: <ol style="list-style-type: none"> 1. Preparation and processing of concentrates-puree, sauces, ketchups, soup, and paste. 2. Preparation and processing of pickles, and chutneys. 3. Preparation and processing of dehydrated tomato, tomato powder. Example: Processing of tomato sauce: Detailed standard operating procedure and processing steps – grading – washing – pulping- filtering – mixing of additives – concentrate- bottling- pasteurization- cooling – storage. Product formula, processing steps, additives, preservatives used in tomato processing. Quality parameters for raw material, semi-finished, and finished products. Tomato waste and byproducts utilization Training material to be translated as per the local language of the beneficiaries	6	8
Packaging of fruits and vegetable products Advances in packaging, different packaging materials, methods and machineries involved (Primary, Secondary and tertiary) in packaging of fruits and vegetables products with respect to ODOP. Brief of food grade packing material and regulations. Selection of packaging materials standards for fruits and vegetable products specific to ODOP. Nutritional label requirements for specific ODOP as per FSSAI standards. Recent packaging techniques to extend the shelf life of the Product-Aseptic packaging, tetra pack, convenient and smart packaging. Advances in storage of fruits and vegetables including low temperature, CA and MA storage.	3	1
Food safety regulations & certification Need for testing of food, notified NABL labs, referral labs and reference labs in India. GMP, GHP, GLP practices relevant to fruits and vegetable processing. HACCP implementation program. Regulations and standards for maintaining food safety and quality - FSSAI and International standards – FSSAI packaging and labelling requirements. FSSAI registration and licensing procedure.	4	1
Entrepreneurship Development Program – 21 hr		
Entrepreneurship & its features - Business Opportunity Identification - Conducting market survey & preparing a feasibility report - IPR issues for entrepreneurs- Legal Aspects of Business and Creation of enterprise.	6	0
Financial Aspects of Business- Legal compliances for Business - Marketing and branding - Product Development- Digital Media.	8	0
DPR Essentials and Availing Bank Credit- Hygiene, FSSAI standards, Weights & Measures Regulation and Registration etc. and issues specific to food processing sector - Case and/or Success stories.	7	0
Sub total	39	11
*if required		Total: 50 hr

335328/2021/PMFME Training of Beneficiary Category 1 (ToBs) Syllabus - Food Domain and EDP for (New and Existing Entrepreneurs)

7.2 Dairy Processing

Technical Aspects: Processing, Value addition, Supply Chain, Machinery, Packaging and Storage, Procurement, Product Development, Food safety regulations & certification.

Training Time: 50 hr (Online + Offline)

Technical aspects		
Training Syllabus	Time duration (hr)	
	Online / Offline	Demo/ Self-learning
Domain Skills – 29 hr		
Introduction Overview of PMFME scheme, guidelines, objectives, capacity building framework and its implementation. Status, market size and Scope of dairy processing industry in India; Selection, Procurement and supply chain management of milk for dairy processing industry.	2	0
Plant layout and maintenance Introduction to food plant design - plant location – location factors, site selection- layout. Repair and maintenance of equipment – preventive and breakdown maintenance – replacement of equipment. PRP and OPRP guidelines- Waste disposal – sewage treatment.	3	1
Equipment's and specifications of machineries in processing Equipment and specification involved in unit operations of milk processing. Process control equipment and accessories for a complete milk processing plant.CIP: Cleaning & sanitization of processing equipment's	6	8
Processing and value addition of Milk Processing of fluid milk- chilling, standardization, homogenization, pasteurization, cream separation, and packing. Sensitization about types of processed fluid milk- standardized milk, toned, double toned and skimmed milk. Aseptic processing of milk.	6	8
Value addition (It can be modified to specific ODOP by the DLT'S) Milk – as an example: Standardized milk, flavored milk, paneer, curd. Example Paneer: Detailed standard operating procedure for paneer: receiving milk – chilling – standardization - boiling – addition of additive- curdling - filtering – pressing- cold immersion – cutting – packing. Quality parameters of raw material and finished product as per the FSSAI guidelines.	6	8
Training material to be translated as per the local language of the beneficiaries		
Packaging of Milk and Milk Products Advances in packaging, different packaging materials, methods and machineries involved (primary, secondary and tertiary) in packaging of milk and milk products. Selection of packaging materials, standards for milk and milk products with respect to specific ODOP. Recent packaging techniques to extend the shelf life of the product-aseptic packaging, convenient and smart packaging. Advances in storage of milk and milk products with specific ODOP.	3	1
Food safety regulations & certification Need for testing of Food, notified NABL labs, referral labs and reference labs in India. GMP, GHP, GLP practices relevant to dairy processing. HACCP implementation program. Regulations and standards for maintaining food safety and quality - FSSAI and International standards – FSSAI packaging and labelling requirements. FSSAI registration and licensing procedure – instant adulteration test procedures and safe microbial load of unprocessed milk.	4	1
Entrepreneurship Development Program – 21 hr		
Entrepreneurship & its features - Business Opportunity Identification - Conducting market survey & preparing a feasibility report - IPR issues for entrepreneurs- Legal Aspects of Business and Creation of enterprise.	6	0
Financial Aspects of Business- Legal compliances for Business - Marketing and branding - Product Development- Digital Media.	8	0
DPR Essentials and Availing Bank Credit- Hygiene, FSSAI standards, Weights & Measures Regulation and Registration etc. and issues specific to food processing sector - Case and/or Success stories.	7	0
Sub total	39	11
*if required		Total: 50 hr

335328/2021/PMFME Training of Beneficiary Category 1 (ToBs) Syllabus - Food Domain and EDP for (New and Existing Entrepreneurs)

7.3 Grain processing

Technical Aspects: Processing, Value addition, Supply Chain, Machinery, Packaging and Storage, Procurement, Product Development, Food safety regulations & certification.

Training Time: 50 hr (Online + Offline)

Technical aspects		
Training Syllabus	Time duration (hr)	
	Online / Offline	Demo/ Self-learning
Domain Skills – 29 hr		
Introduction: Overview of PMFME scheme, guidelines, objectives, capacity building framework and its implementation. Status and scope of grain processing; preprocessing of cereals and pulses with respective ODOP- drying, cleaning, grading and detection of extraneous matter. Effect of different factors on various properties	2	0
Plant layout and maintenance for grain processing Introduction to food plant design - plant location - location factors, site selection- layout. Repair and maintenance of equipment – preventive and breakdown maintenance – replacement of equipment. Equipments and specifications of machineries in grain processing (specific to ODOP) Equipment and specification involved in unit operations & specifications of machineries involved in grain processing industry with respect of ODOP.	3	1
Value addition (It can be modified to specific ODOP by the DLT'S) Value added product from rice: <ul style="list-style-type: none"> • Puffed rice • Flaked rice Example: Puffed Rice: Processing equipment used in grain processing with respect to ODOP- unit operations – paddy cleaning – soaking – parboiled rice – milling – dry heat parboiled rice in pan- salting – roasting in hot sand – expanded rice- cooling – packing. Example: Rice Flakes: Processing equipment used in grain processing with respect to ODOP- unit operations – paddy cleaning – soaking –roasting – tempering – flaking – cooling – packing. Training material to be translated as per the local language of the beneficiaries	6	8
Packaging of grains Advance in packaging, different packaging materials, methods and machineries involved (primary, secondary and tertiary) in packaging of grains with respect to ODOP. Selection of packaging materials and standards grains. Recent packaging techniques to extend the shelf life of the value added products- flexible packing, MAP.	3	1
Food safety regulations & certification Need for testing of food, notified NABL labs, referral labs and reference labs in India. GMP, GHP, GLP practices, Quality of processed grains as per the standards given in food safety regulation on standards in Section 2.4 (Cereal Products) and 2.4.6 (Food Grains), Safe storage temperature and moisture content of food grains. HACCP implementation program. Regulations and standards for maintaining food safety and quality –BIS, FSSAI and International standards – FSSAI packaging and labeling requirements. FSSAI registration and licensing procedure.	4	1
Entrepreneurship Development Program – 21 hr		
Entrepreneurship & its features - Business Opportunity Identification - Conducting market survey & preparing a feasibility report - IPR issues for entrepreneurs- Legal Aspects of Business and Creation of enterprise.	6	0
Financial Aspects of Business- Legal compliances for Business - Marketing and branding - Product Development- Digital Media.	8	0
DPR Essentials and Availing Bank Credit- Hygiene, FSSAI standards, Weights & Measures Regulation and Registration etc. and issues specific to food processing sector - Case and/or Success stories.	7	0
Sub total	39	11
*if required	Total: 50 hr	

335328/2021/PMFME Training of Beneficiary Category 1 (ToBs) Syllabus - Food Domain and EDP for (New and Existing Entrepreneurs)

7.4 Fish and Marine Processing

Technical Aspects: Processing, Value addition, Supply Chain, Machinery, Packaging and Storage, Procurement, Product Development, Food safety regulations & certification.

Training Time: 50 hr (Online + Offline)

Technical aspects	Time duration (hr)	
	Online / Offline	Demo/ Self-learning
Training Syllabus		
Domain Skills – 29 hr		
Introduction Overview of PMFME scheme, guidelines, objectives, capacity building framework and its implementation. Status, market size and Scope of fish and marine food processing industry in India; Selection, procurement and supply chain management of fish and marine food for processing industry.	2	0
Plant layout and maintenance Introduction to food plant design - plant location - location factors, site selection- layout. Repair and maintenance of equipment – preventive and breakdown maintenance – replacement of equipment. Equipments and specifications of machineries in F&M processing Equipment and specification involved in unit operations of fish and marine food processing specific to ODOP. CIP system & program. Equipments used in fish processing units- cold storage for processing and preservation, fish cutting machine -fish-de-scaling machine, solar drying unit.	3	1
Value addition of Fish and Marine (It can be modified to specific ODOP by the DLTs) Value added products from fish: Salt curing and smoking – drying of fish - freezing preservation - freezing methods– Block Frozen, IQF and cooked forms. Minced products - surimi process – fish meal- fish oil. Ready to cook frozen products, fish protein isolate- fermented fish sauce- waste and by-products utilization. Handling and preservation of fish and marine products specific to ODOP: Example: Fish surimi: Receiving fish- heading and gutting – meat separation – washing – dewatering – mixing with cryoprotectants – forming – packaging- cold storage. Training material to be translated as per the local language of the beneficiaries	6	8
Packaging of Fish and Marine Products Advance in packaging, different packaging materials, methods and machineries involved (primary, secondary and tertiary) in packaging of fish and marine products respective to ODOP. Selection of packaging materials standards for fish and marine products. Recent packaging techniques to extend the shelf life of the product-aseptic packaging, convenient and smart packaging. Advances in storage of fish and marine products.	3	1
Food safety regulations & certification Need for testing of food, notified NABL labs, referral labs and reference labs in India. GMP, GHP, GLP practices relevant to fish and marine food processing. HACCP implementation program. Regulations and standards for maintaining food safety and quality –FSSAI regulation – 2.6.1 and International standards – FSSAI packaging and labeling requirements. FSSAI registration and licensing procedure.	4	1
Entrepreneurship Development Program – 21 hr		
Entrepreneurship & its features - Business Opportunity Identification - Conducting market survey & preparing a feasibility report - IPR issues for entrepreneurs- Legal Aspects of Business and Creation of enterprise.	6	0
Financial Aspects of Business- Legal compliances for Business - Marketing and branding - Product Development- Digital Media.	8	0
DPR Essentials and Availing Bank Credit- Hygiene, FSSAI standards, Weights & Measures Regulation and Registration etc. and issues specific to food processing sector - Case and/or Success stories.	7	0
Sub total	39	11
*if required	Total: 50 hr	

335328/2021/PMFME Training of Beneficiary Category 1 (ToBs) Syllabus - Food Domain and EDP for (New and Existing Entrepreneurs)

7.5 Meat and Poultry Processing

Technical Aspects: Processing, Value addition, Supply Chain, Machinery, Packaging and Storage, Procurement, Product Development, Food safety regulations & certification.

Training Time: 50 hr (Online + Offline)

Technical aspects		
Training Syllabus	Time duration (hr)	
	Online / Offline	Demo/ Self-learning
Domain Skills – 29 hr		
Introduction Overview of PMFME scheme, guidelines, objectives, capacity building framework and its implementation. status, market size and Scope of meat and poultry processing industry in India; Selection, procurement and supply chain management of meat and poultry for processing industry.	2	0
Plant layout and maintenance Introduction to food plant design - plant location – location factors, site selection- layout. Repair and maintenance of equipment – preventive and breakdown maintenance – replacement of equipment. Equipment's and specifications of machineries in M&P processing Equipment and specification involved in unit operations of meat and poultry processing. CIP: Cleaning & sanitization of processing equipment's: CIP system & program. Processing line for poultry industry – shackling – stunning – beeding – scalding – picking – evisceration – washing – chilling- cut bone deboning – stoning.	3	1
Value addition of meat and poultry (It can be modified to specific ODOP by the DLT'S) Value added product from poultry: Egg powder, chicken sausages, chicken nuggets, patties. Egg powder production: Receiving - quality analysis of egg – breaking shell removing- separation of components- filtration – pasteurization – spray drying – packing. uses of egg powder in bakery and confectionary, noodles and pasta, mayonnaise and salad dressings. Waste and byproducts utilization. Chicken nugget: raw material inspection- storage- chopping / mincing– mixing with additives – mixing- forming- frying. Value added product from meat: Dried and smoked meat products, sausages, semi dry sausages, dry sausages. Cured meat products. Restructured meat. Fried, broiled, roasted meat products. Braising and stewing of meat products. Curries, bacon, ham, cutlet-mix, chicken-n-ham and salami. Example: Sausages production: Raw material receiving – quality check- chopping – grinding – mixing of additives – emulsification – stuffing – linking and tying – cooking / smoking – chilling – packing- storing. Training material to be translated as per the local language of the beneficiaries	6	8
Packaging of meat and poultry products Advances in packaging, different packaging materials, methods and machineries involved (primary, secondary and tertiary) in packaging of meat and poultry products with respect to ODOP. Selection of packaging materials standards for meat and poultry products. Recent packaging techniques to extend the shelf life of the product-aseptic packaging, convenient and smart packaging. Advances in storage of meat and poultry products.	3	1
Food safety regulations & certification Need for testing of food, notified NABL labs, referral labs and reference labs in India. GMP, GHP, GLP practices relevant to meat and poultry processing. HACCP implementation program. Regulations and standards for maintaining food safety and quality –FSSAI (Regulation – 2.5.1 – 2.5.3) and International standards – FSSAI packaging and labelling requirements. FSSAI registration and licensing procedure.	4	1
Entrepreneurship Development Program – 21 hr		
Entrepreneurship & its features - Business Opportunity Identification - Conducting market survey & preparing a feasibility report - IPR issues for entrepreneurs- Legal Aspects of Business and Creation of enterprise.	6	0
Financial Aspects of Business- Legal compliances for Business - Marketing and branding - Product Development- Digital Media.	8	0
DPR Essentials and Availing Bank Credit- Hygiene, FSSAI standards, Weights & Measures Regulation and Registration etc. and issues specific to food processing sector - Case and/or Success stories.	7	0
Sub total	39	11
*if required		Total: 50 hr

335328/2021/PMFME Training of Beneficiary Category 1 (ToBs) Syllabus - Food Domain and EDP for (New and Existing Entrepreneurs)

7.6 Bakery and Confectionery Processing

Technical Aspects: Processing, Value addition, Supply Chain, Machinery, Packaging and Storage, Procurement, Product Development, Food safety regulations & certification.

Training Time: 50 hr (Online + Offline)

Technical aspects		
Training Syllabus	Time duration (hr)	
	Online / Offline	Demo/ Self-learning
Domain Skills – 29 hr		
Introduction Overview of PMFME scheme, guidelines, objectives, capacity building framework and its implementation. Status, market size and scope of bakery and confectionery industries in India- Raw materials for bakery and confectionery products specifications, compositions, role of raw materials - flour, types of flour, quality assessment of flour, sugar, shortenings, leavening agents, egg, salt, water, moistening agent, cocoa products, fruits, nuts, improvers, flavoring and coloring agents.	2	0
Plant layout and maintenance Introduction to food plant design - plant location - location factors, site selection- layout. Repair and maintenance of equipment – preventive and breakdown maintenance – replacement of equipment. Bakery machinery and equipment: Identification and selection of bakery and confectionary equipment’s-weighing equipment- manual scale, Mixing- blenders, Make up equipment, divider, rounder, proofer, molders. Baking equipment – different oven, slicer. Confectionary products machines. Importance of metal detector used in bakery industry.	3	1
Value addition of Bakery and Confectionery products (It can be modified to specific ODOP by the DLT’S) Bread making- methods- Manufacturing process of breads, biscuit, cookies- crackers- buns- preservation of bakery products. Frozen bakery products. Production of chocolate, fondant, caramels, fudge and toffee and cakes and pastries. Example bread making: Raw material receiving – quality check- batch making (addition of ingredients with respective proposition) – kneading – molding – panning - Proofing – baking – cooling – slicing – packing. Training material to be translated as per the local language of the beneficiaries	6	8
Packaging of Bakery Products: Advance in packaging, different packaging materials, methods and machineries involved (primary, secondary and tertiary) in packaging of bakery products with respect to ODOP. Selection of packaging materials (flexible and rigid packing). Recent packaging techniques to extend the shelf life of the product such (MAP).	3	1
Food safety regulations & certification Need for testing of food, notified NABL labs, referral labs and reference labs in India. GMP, GHP, GLP practices, HACCP implementation program – importance of PRP and OPRP requirement in baking industry. Regulations and standards for maintaining food safety and quality, Standards Fssai for bakery products 2.4.15 –BIS, FSSAI and International standards – FSSAI packaging and labelling requirements. FSSAI registration and licensing procedure.	4	1
Entrepreneurship Development Program – 21 hr		
Entrepreneurship & its features - Business Opportunity Identification - Conducting market survey & preparing a feasibility report - IPR issues for entrepreneurs- Legal Aspects of Business and Creation of enterprise.	6	0
Financial Aspects of Business- Legal compliances for Business - Marketing and branding - Product Development- Digital Media.	8	0
DPR Essentials and Availing Bank Credit- Hygiene, FSSAI standards, Weights & Measures Regulation and Registration etc. and issues specific to food processing sector - Case and/or Success stories.	7	0
Sub total	39	11
*if required	Total: 50 hr	

335328/2021/PMFME Training of Beneficiary Category 1 (ToBs) Syllabus - Food Domain and EDP for (New and Existing Entrepreneurs)

7.7 Fat and oil seed processing

Technical Aspects: Processing, Value addition, Supply Chain, Machinery, Packaging and Storage, Procurement, Product Development, Food safety regulations & certification.

Training Time: 50 hr (Online + Offline)

Technical aspects		
Training Syllabus	Time duration (hr)	
	Online / Offline	Demo/ Self-learning
Domain Skills – 29 hr		
Introduction Overview of PMFME scheme, guidelines, objectives, capacity building framework and its implementation. Status, market size and Scope of fats and oil seed processing industry in India; Selection, Procurement and supply chain management of fats and oil seed for processing industry.	2	0
Plant layout and maintenance Introduction to food plant design - plant location - location factors, site- layout. Repair and maintenance of equipment – preventive and breakdown maintenance – replacement of equipment. waste treatment plant operation management, safe disposal of plant waste. Equipment and specifications of machineries in fats and oil seed processing Equipment and specification involved in unit operations of fats and oil seed processing with respect to specific ODOP. Traditional cold press and virgin oil processing CIP: Cleaning & sanitization of processing equipment's: objectives, frequency, procedures, mechanical cleaning aspects, CIP system & program.	3	1
Processing of fats and oil seeds - (It can be modified to specific ODOP by the DLT'S) Value added product from Milk and animal fats: Production, characteristics, composition, processing and utilization of milk fats and butter, animal fats such as lard and tallow, fish and marine oils. Value added products from Edible oil sources: Coconut, palm, palm kernel, olive, cocoa butter, sunflower, safflower, sesame, groundnut, mustard, rapeseed, canola, soybean, linseed, castor, rice-bran, cottonseed. Processing of oils seeds and Refining of oil. By product utilization of oil milling industries. Example vegetable oil: Detailed unit operation - selection of quality oil seeds- crushing – crude oil extraction – degumming – de-acidification – de-colorization – de-Odorizing – refined Edible oil. Example processing of butter: Detailed unit operation of butter making process- receiving milk- sampling – quality checks – heating – separation of cream – standardization of fat – pasteurization – ripening – cooling and aging – churning – salting – testing of finished product- packing – storage. Training material to be translated as per the local language of the beneficiaries	6	8
Packaging of fats and oils Advance in packaging, requirements, different packaging materials, methods and machineries involved (primary, secondary and tertiary) in packaging of fats and edible oils. Selection of packaging materials standards for fats and oils. Advances in storage of fats and oils. - changes during storage –rancidity – causes – atmospheric oxidation and enzyme action – free fatty acid – color.	3	1
Food safety regulations & certification Need for testing of food, notified NABL labs, referral labs and reference labs in India. Concept of quality assurance and quality control in relation to fat and oil industry; quality management systems - ISO 9000; TQM, HACCP, GMP, GHP, GLP relevant to fat and oilseed processing; role of International organizations- ISO, IDF, CAC, AOAC and WTO, National organizations - BIS, Agmark; significance of oil and allied products order, FSSAI Standards (2.2.1 to 2.2.24) and APEDA in oil industry; guidelines for setting up quality control laboratory. Legislation on fats and oils, packaging laws and testing of packaged materials.	4	1
Entrepreneurship Development Program – 21 hr		
Entrepreneurship & its features - Business Opportunity Identification - Conducting market survey & preparing a feasibility report - IPR issues for entrepreneurs- Legal Aspects of Business and Creation of enterprise.	6	0
Financial Aspects of Business- Legal compliances for Business - Marketing and branding - Product Development- Digital Media.	8	0
DPR Essentials and Availing Bank Credit- Hygiene, FSSAI standards, Weights & Measures Regulation and Registration etc. and issues specific to food processing sector - Case and/or Success stories.	7	0
Sub total	39	11
*if required	Total: 50 hr	

7.8 Spices and Plantation Crops Processing

Technical Aspects: Processing, Value addition, Supply Chain, Machinery, Packaging and Storage, Procurement, Product Development, Food safety regulations & certification.

Training Time: 50 hr (Online + Offline)

Technical aspects	Time duration (hr)	
	Online / Offline	Demo/ Self-learning
Training Syllabus		
Domain Skills – 29 hr		
Introduction Overview of PMFME scheme, guidelines, objectives, capacity building framework and its implementation. Status, market size and scope of spices and plantation crop processing industry in India; Selection, procurement and supply chain management of spices and plantation crop for processing industry.	2	0
Plant layout and maintenance for spices and plantation crops processing Introduction to food plant design - plant location - location factors, site selection- layout. Repair and maintenance of equipment – preventive and breakdown maintenance – replacement of equipment. Equipment and specifications of machineries in spices and plantation crop processing Different unit operations pertaining to spices and plantation crops processing with respect to specific ODOP. Equipment and specification involved in unit operations of different spices and plantation crop processing. CIP: Cleaning & sanitization of processing equipment.	3	1
Value addition of spices and plantation crops (It can be modified to specific ODOP by the DLTs) Spices: Extracts-Essential oils, oleoresin, flavor and natural color and pigments. Preparation of powders, dried spices and condiments, Curry mixes, Curry Paste, dehydrated products. Pepper-dehydrated green pepper, white pepper and canned pepper. Example: Sambar powder making: Recipe formula / standardization – selection of ingredients-quality checks – washing – drying - weighting of ingredients – roasting – pulverizing – packing – storage. Training material to be translated as per the local language of the beneficiaries	6	8
Packaging of spices and plantation crop Products Advance in packaging, different packaging materials, methods and machineries involved (primary, secondary and tertiary) in packaging of spices and plantation crop and their value-added products. Selection of packaging materials and standards for spices and plantation crop products. Recent packaging techniques to extend the shelf life of the product such as oil, oleoresin, coconut milk, preserve and juices. Technologies - Aseptic packaging, tetra pack, MAP, hermetic packaging, convenient intelligent and smart packaging. Advances in storage of spices and plantation crops.	3	1
Food safety regulations & certification Need for testing of food, notified NABL labs, referral labs and reference labs in India. GMP, GHP, GLP practices, ASTA standards for clean spices and CODEX national and international standards relevant to Black pepper, cardamom, turmeric, ginger, tamarind, curry leaf and coriander in spices and tea, coffee, cocoa, cashew, rubber in plantation crops. HACCP implementation program. Regulations and standards for maintaining food safety and quality – BIS, FSSAI standards (Spices 2.9 – Tea and Coffee- 2.10) and International standards – FSSAI packaging and labelling requirements. FSSAI registration and licensing procedure.	4	1
Entrepreneurship Development Program – 21 hr		
Entrepreneurship & its features - Business Opportunity Identification - Conducting market survey & preparing a feasibility report - IPR issues for entrepreneurs- Legal Aspects of Business and Creation of enterprise.	6	0
Financial Aspects of Business- Legal compliances for Business - Marketing and branding - Product Development- Digital Media.	8	0
DPR Essentials and Availing Bank Credit- Hygiene, FSSAI standards, Weights & Measures Regulation and Registration etc. and issues specific to food processing sector - Case and/or Success stories.	7	0
Sub total	39	11
*if required		Total: 50 hr

7.9 Minor Forest Produce Processing

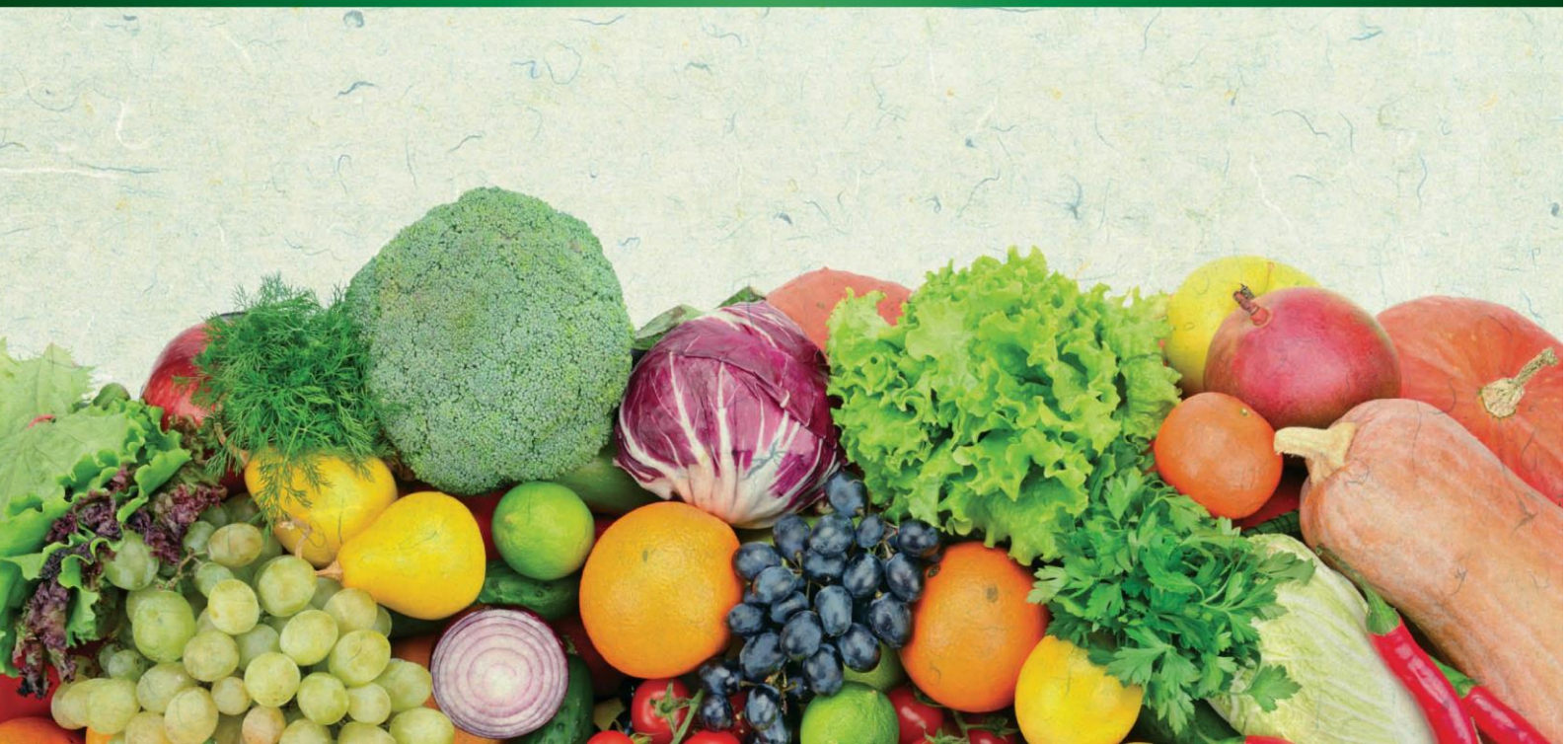
Technical Aspects: Processing, Value addition, Trading, Machinery, Packaging and Storage, Procurement, Food safety regulations & certification.

Training Time: 50 hr (Online + Offline)

Technical aspects		
Training Syllabus	Time duration (hr)	
	Online / Offline	Demo/ Self-learning
Domain Skills – 29 hr		
Introduction Overview of PMFME scheme, guidelines, objectives, capacity building framework and its implementation. Status and scope of minor forest produce (MFP); Types of minor forest produce under different categories – medicinal, essential oils. edible wild plants, gums, resins, natural coloring materials, exotic Spices (king chili) etc.	2	0
Collection & trading of minor forest produce Significance in tribal economy–Sustainable cultivation & collection methods, mechanism of marketing of minor forest produce – minimum support price- promotion Equipment and specifications of machineries in minor forest produce Equipment involved in collection of minor forest produce. Specifications of machineries involved in processing of different minor forest produce with respect to specific ODOP. CIP: cleaning & sanitization of processing equipment.	3	1
Value addition (It can be modified to specific ODOP by the DLTs) Sugar conserves: Jams, jellies, toffee. Beverages: Juices, squashes, syrups, nectars, RTS. Preparation of concentrates-puree, soup, and paste. Preparation of pickles, and chutneys. Medicinal & aromatic products. Traditional herbals –Preparation of herbal tea, Wild honey – preparation of herbal infused honey- garlic honey, cinnamon honey. Example Flavored Honey Processing: Raw honey – screening – filtering – addition of herbs/ spices - pasteurization – cooling – filling – packing – storing – labeling – branding. Training material to be translated as per the local language of the beneficiaries	6	8
Packaging of minor forest products Different packaging materials, methods and machineries involved (primary, secondary and tertiary) in packaging of MFP & their value added products with respective ODOP. Selection of packaging materials standards for minor forest produce. Recent packaging techniques to extend the shelf life of the product. Storage of value added products from minor forest produce.	3	1
Food safety regulations & certification Need for testing of food, notified NABL labs, referral labs and reference labs in India. GMP guidelines of basic sanitary practice to be followed by food handlers given by FSSAI, GHP, GLP practices relevant to minor forest produce. Indian forest act, status of certification of non-timber forest products (NFTP). FSSAI registration and licensing procedure.	4	1
Entrepreneurship Development Program – 21 hr		
Entrepreneurship & its features - Business Opportunity Identification - Conducting market survey & preparing a feasibility report - IPR issues for entrepreneurs- Legal Aspects of Business and Creation of enterprise.	6	0
Financial Aspects of Business- Legal compliances for Business - Marketing and branding - Product Development- Digital Media.	8	0
DPR Essentials and Availing Bank Credit- Hygiene, FSSAI standards, Weights & Measures Regulation and Registration etc. and issues specific to food processing sector - Case and/or Success stories.	7	0
Sub total	39	11
*if required		Total: 50 hr



Syllabus for Training of Beneficiaries Category 2 under PMFME Scheme



Duration: 24 hours

Technical aspects	
Training Syllabus	Time duration (hr)
	Offline
Domain Skills – 13 hr	
Introduction Overview of PMFME scheme, guidelines, objectives, capacity building framework and its implementation. Status, market size and scope of fruit and vegetable processing industry in India; Selection, procurement and supply chain management of fruits and vegetables specific to ODOP for processing industry; Imparting skills on various equipment's used for primary processing, cleaning, washing, sorting and handling, and its maintenance and precautions.	1
Plant layout and maintenance Introduction to food plant design - plant location - location factors, site selection- layout - repair and maintenance of equipment – preventive and breakdown maintenance – replacement of equipment. Equipment and specifications of machineries in F&V processing Various methods of fruit and vegetable preservation Specific to ODOP: Minimal processing, Equipment and specification involved in unit operations of fruits and vegetables. Cleaning & sanitization of processing equipment.	2
Value addition (It can be modified to specific ODOP by the DLT'S) Tomato as example is given below: List of value-added products can be made out of tomato: <ol style="list-style-type: none"> 1. Preparation and processing of concentrates-puree, sauces, ketchups, soup, and paste. 2. Preparation and processing of pickles, and chutneys. 3. Preparation and processing of dehydrated tomato, tomato powder. Example: Processing of tomato sauce: Detailed standard operating procedure and processing steps – grading – washing – pulping-filtering – mixing of additives – concentrate- bottling- pasteurization- cooling – storage. Product formula, processing steps, additives, preservatives used in tomato processing. Quality parameters for raw material, semi-finished, and finished products. Tomato waste and by products utilization Training material to be translated as per the local language of the beneficiaries	4
Packaging of fruits and vegetable products Advances in packaging, different packaging materials, methods and machineries involved (Primary, Secondary and tertiary) in packaging of fruits and vegetables products with respect to ODOP. Brief of food grade packing material and regulations. Selection of packaging materials standards for fruits and vegetable products specific to ODOP. Nutritional label requirements for specific ODOP as per FSSAI standards. Recent packaging techniques to extend the shelf life of the Product-Aseptic packaging, tetra pack, convenient and smart packaging. Advances in storage of fruits and vegetables including low temperature, CA and MA storage.	3
Food safety regulations & certification Need for testing of food, notified NABL labs, referral labs and reference labs in India. GMP, GHP, GLP practices relevant to fruits and vegetable processing. HACCP implementation program. Regulations and standards for maintaining food safety and quality - FSSAI and International standards – FSSAI packaging and labelling requirements. FSSAI registration and licensing procedure.	3
Platform Skills – 11 hr	
Legal compliances for Business - Marketing and branding - Product Development- Digital Media.	6
DPR Essentials and Availing Bank Credit Hygiene, Weights & Measures Regulation and Registration etc.	5
Total	24



**Syllabus for Training of
District Resource Person under PMFME Scheme**



Training Time: 16 hr/2 days

Technical aspects		
Training Syllabus (2days)	Time duration (hr)	
	Offline	Demo/ Self-learning
Day 1 – 8 hr		
Introduction Overview of PMFME scheme, guidelines, objectives, capacity building framework and its implementation. status, market size and scope of food grain processing industry in India; selection, procurement and supply chain management of food processing industry. State SNA and SLTI details, list of master trainer and list of ToT, details, list of training centre in states, registration and login procedure for beneficiaries. Application process of PMFME scheme portal login and funding procedures	1	0
MIS: Overview of MoFPI Website, Application registration page, Application portal, filling of application, DRP/DLC Interface	1	0
Details of Various Food processing operations and requirements for food industry <ol style="list-style-type: none"> 1. Introduction to food plant design 2. Value addition of foods - Introduction on value addition and the different food sub domain under PMFME, List of incubation center under PMFME scheme list of processed foods uploaded in PMFME portal based on the ODOP. List of technology available for food processing under PMFME scheme, List of states and district producing large volume of food products in different food domain. 3. Packaging requirement of food products and standards of packing materials 4. Food safety regulations & certification – Notified NABL Laboratories and contacts 5. National Technical Institution for food processing sector and the available technology 	2	0
Registration and Licensing documentation procedure for food microentrepreneurs through online GST Registration, FSSAI Registration, MSME Registration (Udyog Adhar/Udyam Registration), PAN Registration, Apeda Registration, Fire safety license, Pollution control board approval, Income tax, trade license (Corporation Licensing), Water analysis report from NABL Lab (for Public health department), Health certificate (From Civil surgeon) IEC License, EIC, EIA License and Health certificate.	1	0
Soft skills and communication Importance of soft skills and communication -networking skills–creative& innovative thinking – problem management – stress and emotional management – leadership and teaming up – confidence building – entrepreneur competencies – risk taking and goal settings - effective communication skills.	1	0
Introduction to DPR preparation: Significance and contents of DPR for availing bank credits DPR Essentials: Project summary, about the product, and process flow chart.	2	0

Day 2 8hr (Food Business Management)		
<p>Hands on training on model DPR preparation Economics of the project covering: Basics and presumptions, capacity and utilization premises/ infrastructure, machinery & equipment, misc. Fixed assets, total cost of the project, means of finance, term loan, term loan repayment & interest schedule, working capital calculations, salaries/wages, consumables, power/ water, depreciation calculation, repairs & maintenance, marketing/selling expenses, projections of profitability analysis, break-even-point analysis, projected balance sheet, cash-flow statement, debt-service coverage ratio, mention of possible output for the given capacity.</p>	3	1
<p>Financial assistance: Funding bodies for food business, central and state government funding schemes, schemes and financial support in nationalized banks, documents required for applying scheme loan. Financial aspects of business legal compliance, tax compliances, invoices and orders, legal modalities, bank accounts.</p>	2	0
<p>Marketing and Branding Marketing concept, Ps of marketing, STP, types of marketing (B2B, B2C, C2B, C2C), market segmentation, marketing plan, branding, advertisement, digital media, digital marketing platforms, product life cycle, and significance of digital media and marketing techniques. Introduction and scope on export. List of countries importing foods and their food safety regulations bodies and standards.</p>	2	0
Sub total	15	1
Total:	16 hr	
Assessment by FICSI	4hr	

Training of DRP (Non-Food Domain)

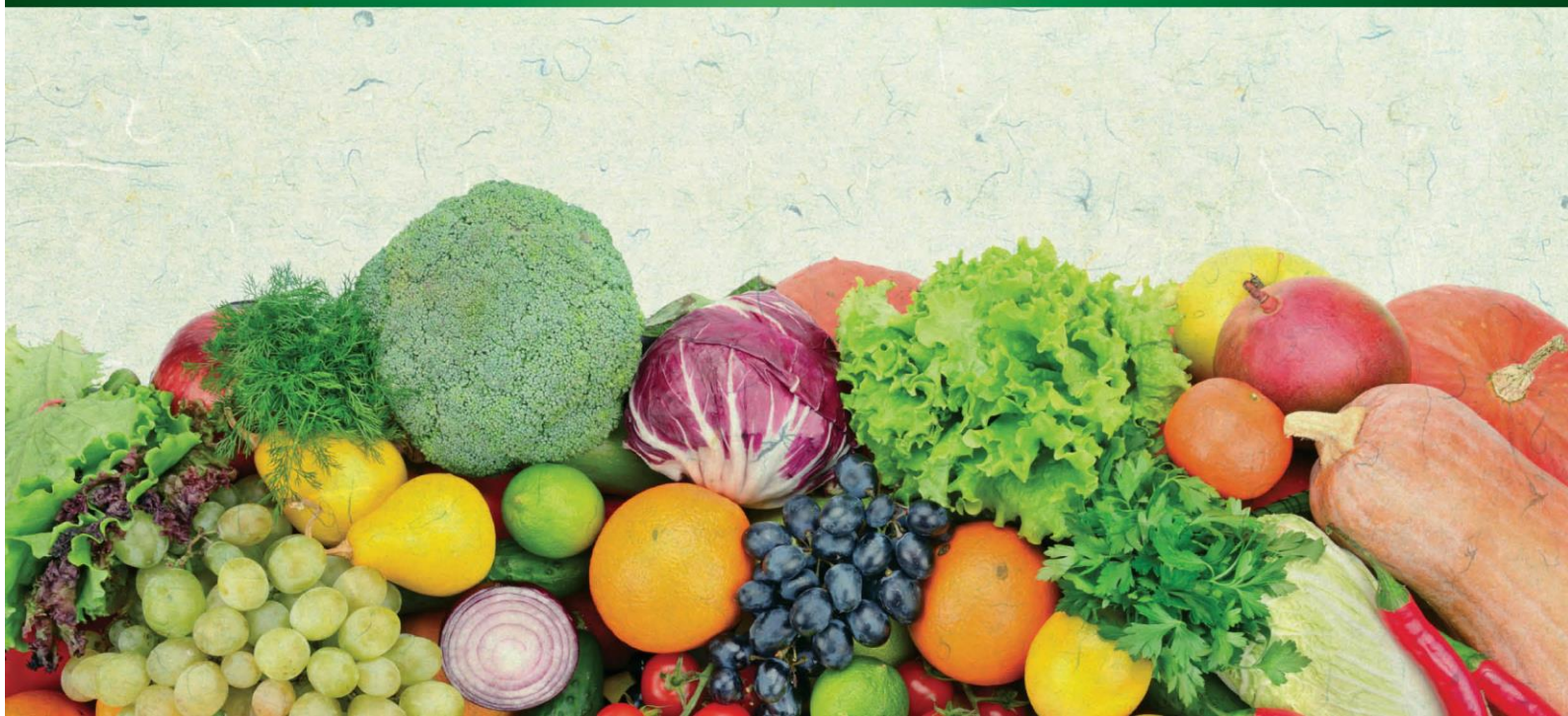
Training Time: 24 hr/3 days

Technical aspects		
Training Syllabus	Time duration (hr)	
	Offline	Demo/ Self-learning
Day 1 – 8hr		
Introduction Overview of PMFME scheme, guidelines, objectives, capacity building framework and its implementation. status, market size and scope of food grain processing industry in India; selection, procurement and supply chain management of food processing industry. State SNA and SLTI details, list of master trainer and list of ToT, details, list of training centre in states, registration and login procedure for beneficiaries. Application process of PMFME scheme portal login and funding procedures	1	0
MIS: Overview of MoFPI Website, Application registration page, Application portal, filling of application, DRP/DLC Interface	1	0
Details of Various Food processing operations and requirements for food industry <ol style="list-style-type: none"> 1. Introduction to food plant design 2. Value addition of foods - Introduction on value addition and the different food sub domain under PMFME, List of incubation center under PMFME scheme list of processed foods uploaded in PMFME portal based on the ODOP. List of technology available for food processing under PMFME scheme, List of states and district producing large volume of food products in different food domain. 3. Packaging requirement of food products and standards of packing materials 4. Food safety regulations & certification – Notified NABL Laboratories and contacts 5. National Technical Institution for food processing sector and the available technology 	4	2
Day 2 - 8 hr		
Registration and Licensing documentation procedure for food micro-entrepreneurs through online GST Registration, FSSAI Registration, MSME Registration (Udyog Adhar/Udyam Registration), PAN Registration, Apeda Registration, Fire safety license, Pollution control board approval, Income tax, trade license (Corporation Licensing), Water analysis report from NABL Lab (for Public health department), Health certificate (From Civil surgeon) IEC License, EIC, EIA License and Health certificate.	3	1
Soft skills and communication Importance of soft skills and communication -networking skills–creative& innovative thinking – problem management – stress and emotional management – leadership and teaming up – confidence building – entrepreneur competencies – risk taking and goal settings - effective communication skills.	1	1
Introduction to DPR preparation: Significance and contents of DPR for availing bank Credits, DPR Essentials: Project summary, about the product and process flow chart.	2	0

Day 3 – 8 hr (Food Business management)		
Hands on training on model DPR preparation Economics of the project covering: Basics and presumptions, capacity and utilization premises/ infrastructure, machinery & equipment, misc. Fixed assets, total cost of the project, means of finance, term loan, term loan repayment & interest schedule, working capital calculations, salaries/wages, consumables, power/ water, depreciation calculation, repairs & maintenance, marketing/selling expenses, projections of profitability analysis, break-even-point analysis, projected balance sheet, cash-flow statement, debt-service coverage ratio, mention of possible output for the given capacity.	3	1
Financial assistance: Funding bodies for food business, central and state government funding schemes, schemes and financial support in nationalized banks, documents required for applying scheme loan. Financial aspects of business legal compliance, tax compliances, invoices and orders, legal modalities, bank accounts.	2	0
Marketing and Branding Marketing concept, Ps of marketing, STP, types of marketing (B2B, B2C, C2B, C2C), market segmentation, marketing plan, branding, advertisement, digital media, digital marketing platforms, product life cycle, and significance of digital media and marketing techniques. Introduction and scope on export. List of countries importing foods and their food safety regulations bodies and standards.	2	0
Sub total	19	5
Total:	24 hr	
Assessment by FICSI	4hr	



List of Equipment Required for Practical Session (Batch Size : 20 Trainees)



List of Equipment Required for Practical Session

Categorization of proposed equipment's list for allocated ODOP products into mandatory and optional		
Product Sub Name /Value Addition	Mandatory Equipment and Machineries	Optional Equipment and Machineries
Coffee products	Centrifuge	Coffee beans extractor
	Coffee bean roaster	
	Grinder	
	Packaging Machinery	
Finger Millet (Ragi) based products	Tray dryer	Cleaner
	Millet Roaster	Washer
	Pulveriser cum sieving machine	Incubator
	Form Fill Seal machine	
Tapioca & Tuber crop products	Dry Sieveing machine	Feed Hopper
	Paddle washer	Oscilating Screen
	Cutting machine	
	Rasper	
	Centifuge sieve	
	Vibrating Sieve	
	Roaster	
Arecanut/ Betelnut	Dehusking machine	Digital Weighing Machine
	Sifter Sieves machine	Boiling Tank
	Packaging Machinery	
Cashew based Products	Size screen	
	Soaking drum	
	Open pan roaster	
	Automatic shelling machine	
	Solar dryer	
	Humidification fan	
	Vacuum sealing machine	
Coconut Oil	Paring Unit	
	Coconut Disintegrater	
	Tabular Bowl Centrifuge	
	Hydraulic Press Screw Press	
	Filter Press	
	Mixing Vessel	
	Oil Tanks	
	Manual Cap Filling Machine	

Mustaard oil	Cleaner	
	Oil Expeller chamber	
	cooking/feeding kettle	
	Filter press with Filter cloth,oil collection tray, complete with all accessories oil pump.	
	electric motor with L&T starter	
	Oil Packaging Machine (Bottle/ Pouch)	
Desiccated Coconut	Cabinet type hot airdrier with blower, motor and other accessories	
	Disintegrator	
	Vibratory sifting machine	
	Platform weighing balance	
	Packaging Machinery	
Dates	Thermo Forming Vacuum Packing machine	
	Weighing machine	
	Printing machine	
Fig Paste	Washing tank	Cold storage
	Fruit pulper	
	Fruit grinding machine	
	Thermic fluid kettle with scraper	
	Colloid mill	
	Paste filling machine	
	Cont.sealing machine	
Apple Jam	Washer	Piston filler unit
	Fruit Pulper/extractor	
	Boiler	
	Steam Kettle	
	Vacuum Pan	
	Cooling Tank	
	Pouch Filling Unit	
Apple Wine	Fruit washing machine	
	Fruit Mill	
	Juice Press	
	Filtration Unit	
	Fermentation Tank	
	Filling & Capping machine	
Dried Apricot	Washing tank	Cold Storage
	Blanching kettle	
	Fruit Pitting machine	
	Solar dryer	

	Pulverizer	
	Centrifugal sifter with screens	
	Shrink tunnel	
	Cont. sealing machine	
Chips	Washing tank	Cold store
	Banana cutter/slicer	
	Blanching kettle Gas operated	
	Dryer	
	Deep fat frying kettle Gas Operated	
	Continuous sealing machine	
Kinnow Drink	Fruit Washer	Cold Storage
	Peeling Machine	
	Juice Extractor	
	Pasteurizer	
	Homogenizer	
	Packaging Machinery	
	Sugar Syrup Tank	
Malta Syrup	Fruit washer	Cold Storage
	Pulper	
	Sugar syrup preparation tank	
	Filter press	
	Thermic Fluid heating kettle	
	Filling & Capping	
Custard Apple Kulfi	Homogenizer	Cold store
	Bulk milk Chiller	
	Rotating – Gas Fired Milk Boiling kettle	
	Ageing tank	
	Kulfi hardening tank	
	De molding tank	
	Continuous sealer	
	Deep Freezer	
Grape Pulp	Washer	
	De-stemmer crusher	
	Steam kettle	
	Pulper	
	Pump	
	Evaporator	
	Boiler	
	Packing machine	
Guava Juice	Washer	

	Fruit Pulper/extractor	
	Boiler	
	Steam Kettle	
	Homogenizer	
	Pasteurizer	
	Cooling Tank	
	Bottling line	
Jackfruit Chips	Peeler	
	Bulb remover	
	Slicer	
	Filling & Capping	
Custard Apple Kulfi	Homogenizer	Cold store
	Bulk milk Chiller	
	Rotating -Gas Fired Milk Boiling kettle	
	Ageing tank	
	Kulfi hardening tank	
	De molding tank	
	Continuous sealer	
	Deep Freezer	
Grape Pulp	Washer	
	De-stemmer crusher	
	Steam kettle	
	Pulper	
	Pump	
	Evaporator	
	Boiler	
	Packing machine	
Guava Juice	Washer	
	Fruit Pulper/extractor	
	Boiler	
	Steam Kettle	
	Homogenizer	
	Pasteurizer	
	Cooling Tank	
	Bottling line	
Jackfruit Chips	Peeler	
	Bulb remover	
	Slicer	
	Blancher cum Dryer	
	Vacuum Fryer	

	Fryer	
	Packing machine	
	Boiler	
Kiwi RTS	Fruit washer	Cold store
	Pulper	
	Sugar syrup preparation tank	
	Mixing/blending tank	
	Filter press	
	Homogenizer	
	Pasteurizer (PHE)	
	Filling & Capping	
Litchi Beverages	Fruit washer	Cold store
	Litchi peeling Machine	
	Twin Pulper	
	Sugar Syrup Preparation tank	
	Mixing/Blending tank	
	Filter press	
	Homogenizer	
	Pasteurizer (PHE)	
	Filling & Capping	
Mango RTS Drink	Mango washer	Cold store
	Mango Pulper	
	Sugar Syrup Preparation tank	
	Mixing/Blending tank	
	Filter press	
	Homogenizer	
	Blancher cum Dryer	
	Vacuum Fryer	
	Fryer	
	Packing machine	
	Boiler	
Kiwi RTS	Fruit washer	Cold store
	Pulper	
	Sugar syrup preparation tank	
	Mixing/blending tank	
	Filter press	
	Homogenizer	
	Pasteurizer (PHE)	
	Filling & Capping	
Litchi Beverages	Fruit washer	Cold store

	Litchi peeling Machine	
	Twin Pulper	
	Sugar Syrup Preparation tank	
	Mixing/Blending tank	
	Filter press	
	Homogenizer	
	Pasteurizer (PHE)	
	Filling & Capping	
Mango RTS Drink	Mango washer	Cold store
	Mango Pulper	
	Sugar Syrup Preparation tank	
	Mixing/Blending tank	
	Filter press	
	Homogenizer	
	Pasteurizer (PHE)	
	Filling & Capping	
Jardalu Mango Leather	Fruit washer	Cold store
	Mango Peeler	
	Pulper	
	Gas operated heating kettle	
	Tray dryer	
	Cont. sealing machine	
Orange Jelly	Fruit Peeler	Cold store
	Fruit slicer	
	Double Jacketed Steam Kettle	
	Blending/mixing Tank	
	Bottle Filling machine	
Tooti Frutti	Dicing Machine	Cold store
	Soaking Tank	Solar Dryer
	Blanching Kettle	
	Sugar Syrup Preparation Tank	
	Cotinuous Sealing Machine	
Peach Juice	Fruit washer	Cold store
	Pulping machine	
	Sugar Syrup Preparation tank	
	Mixing/Blending tank	
	Filter press	
	Homogenizer	
	Pasteurizer (PHE)	
	Filling & Capping	

Pineapple Candy	Fruit washing trough	Cold store
	Fruit Cutter	Shrink tunnel
	Core remova	
	Blanching kettle Gas operated	
	Sugar syrup tank	
	Dryer	
	Induction sealer	
Chocolate Coated Pomegranate	Pomegranate Washing Tank with conveyor	
	Pomegranate Sorter	
	Pomegranate de seeder	
	Pomegranate Blanching Tank	
	Pomegranate Aeration Unit with conveyor	
	Pomegranate feeder with conveyor	
	Chocolate Melting Tank with conveyor	
	Chest cooler	
Sapota Juice	Fruit Washer	
	Inspection Belt Conveyor	
	Flight Elevator	
	Pulper	
	Pasteurizer	
	Packaging Machinery	
Seabuckthorn Juice	Cleaning machine	
	Washer	
	Pulper	
	Clarifier	
	Blending Tank	
	Bottle Filler & Capping m/c	
	Pasteurizer	
Boiler		
Sohiong Jam	Washer	
	Pulper	
	Kettle	
	Bottle Filler	
	Capping & labelling m/c	
	Boiler	
Strawberry crush	Washer	Cold Store
	Fruit Pulper/extractor	
	Steam Kettle	
	Inline Homogenizer	

	Insulated Crush Storage Tank	
	Bottling line	
Orange RTS Drink	Fruit Washer	Cold store
	Citrus juice Extractor	
	Pulper	
	Storage Tank	
	Filter press	
	Homogenizer	
	Steam kettle	
	Boiler	
	Pasteurizer	
	Carbonation Unit	
	Filling & Capping	
Passion Fruit Jam	Washing tank	Cold store
	Passion fruit Pulper	
	Double jacketed steam kettle	
	Filter	
	Blending/mixing tank	
	Bottle filling machine	
Mix Pickle	Spice Grinder	
	Vegetable Slicer	
Ginger Murabba	Washing tank	
	Skin peeling machine	
	Chipping machine	
	Blanching kettle gas opearted	
	Sugar syrup tank	
	Bottle filling machine	
Papad processing	Fully Auto Papad Machine	
	Flour Kneading Machine	
	Flate Sheet making	
	coconut Disintegrate	
	Papad Sheeter	
	Cutter Machine	
	Packaging Machinery	
	Electric Drier	
Moringa Leaf powder	Drum Washer	
	Abrasive Peeling Machine	
	Vegetable slicer	
	Blancher	
	Convective Tray dryer	

	Form, Fill and Sealing machine	
Khahi Sangri Pickle	Soaking Tank	
	Gas operated Cooking Kettle	
	Batch Coding Machine	
Pork Sausage	Meat Mincer with plates	
	Bowl Chopper	
	Sausage Filling Machine	
	Industrial meat smoking machine	
	Vacuum Packaging Machine	
	Metal Detector Machine	
	Blast Freeze	
	Cold Storage	
Meat Processing -Seekh kabab	Meat band Saw	Cold Room
	Meat Mincer	
	Bowl Chopper	
	Combi oven	
	Meat filling Machine	
	Industrial Meat Smoking Machine	
	Vacuum Packaging Machine	
	Metal Detector Machine	
	Blast freezer	
Millet Pasta	Blender/Mixer	
	Cold Extruder	
	Cooking Chamber	
	Dryer	
	Pillow Packing Machine	
Bajra Flour Mill	Vibrating PreCleaner	Silos
	Heavy duty Pulveriser Mill	
	Flour Sifter Machine	
	Packet Filling & Packaging Machine	
Kodo Millet Cookies	Planetary mixer	
	Cookie wire cut machine	
	Rotary oven	
	wrapping machine	
	Weighing balance	
Sorghum Flakes	Winnowing machine	Cont. sealing machine
	Size screen	
	Washing tank	
	Soaking drum	

	Uruli Roaster	
	Roller flaking machine	
	Wood fire Hot air oven	
	Induction sealer	
	Shrink tunnel	
	Batch coding machine	
Pearl Millet Flour	Vibrating PreCleaner	Silos
	Heavy duty Pulveriser Mill	
	Flour Sifter Machine	
	Packet Filling & Packaging Machine	
Frozen Chicken	Chicken Cutting Machine	
	Chicken Scalding Tank	
	Chicken Feather cleaning machine	
	Chicken Head Puller	
	Blast Freezer	
	Cold Chamber	
	Vacuum Packaging machine	
Ginger Powder	Washer cum Peeler	
	Slicer	
	Dryer	
	Polisher	
	Grinder	
	Siever	
	Packing machine	
King chilly pickle	Vegetable washing trough	Cold store
	Brine dipping tank	
	Vegetable cutter	
	Dryer	
	Gas operated kettle	
	Blending/mixing Tank	
	Bottle filling Unit	
	Induction sealer	
	Shrink tunnel	
	Batch coding machine	
Large Cardamom powder	Cold Room	
	Tray Heater	
	pod breaker cum peeler	
	Pulverizer	
	Cont. sealing machine	
	Batch coding machine	

Mustard Sauce	Seed cleaner	
	Vertical Grinding mill	
	Blending/Batch Mixer	
	Electric heating Jacketed Kettle	
	Sauce Packaging Machine	
Tamarind Sauce	Washing tank	
	Soaking Tank	
	Deseeding machine	
	Pulping machine	
	Gas operated Cooking Kettle with scrapper	
	Continuous sealing machine	
	Batch coding machine	
Turmeric Powder	Washer	
	Curing boiler with furnace	
	Dryer	
	Polisher	
	Grinder	
	Siever	
	Packing machine	
Amla Juice	Baby Boiler	
	Fruit Grater	
	Fruit Crusher	
	Hydraulic Juice Press	
	Filter Press	
	Jacketed Kettle	
	Liquid Filling Machine	
	Cap Sealing Machine	
	Crown Corking Machine	
	Pasteurised Tank	
	Oakwod barrels	
	Fruit Washing Tanks	
Cake	Cold store	
	Planetary mixer	
	Moulding tray	
	Rotary oven	
	Pillow packing machine	
Minimally processed/ Frozen Cauliflower	Washer	
	Blancher	
	Cooler And Freezer	
	Sorting Conveyor	

	Pouch sealer	
Gherkins Processing	Washer	
	Grader	
	Inspection Conveyor	
	Overflow brine filler	
	Exhausting cum Capping line	
	Pasteurizer	
	Boiler	
Kachai Lemon Pickle	Washing tank	Cold store
	Blanching kettle	Batch coding machine
	Vegetable cutter	
	Deseeding machine	
	Juice extractor	
	Brine dippink tank	
	Gas operated kettle	
	Blending/mixing Tank	
	Induction sealer	
	Shrink tunnel	
	Bottle filling Unit	
Dehydrated Fenugreek Leaves	Rotary type washing machine	Cold store
	Leaf separator	
	Vegetable cutter/slicer	
	Blanching kettle Gas operated	
	Dryer	
	Induction sealer	
	Shrink tunnel	
	Continuous sealing machine	
	Batch coding machine	
Lemon juice	Lemon Washing Tank with conveyor	Cold store
	Fruit juice Extractor	
	Filter press	
	Inline Homogenizer	
	Gas fired Kettle	
	Juice storage tank	
	Bottling line	
Lime Squash	Washing tank	Cold store
	Fruit juice extractor	
	Sugar syrup preparation tank	
	Mixing/blending tank	
	Filter press	

	Homogenizer	
	Hot Bottle filling line	
Minimally Processed/Frozen Cauliflower	Washer	
	Blancher	
	Cooler And Freezer	
	Sorting Conveyor	
	Pouch sealer	
Canned Mushroom	Boiler	
	Vegetable & Fruit washing machine	
	Can Sterilizer	
	Can Seamer	
	Can Washing machine	
	Can Filling machine	
	Blanching machine	
	Mushroom grading machine	
	Canned Food Exhausting machine	
Olive Oil	Rotary type washing machine with screen	Cold storage
	Hammer Miller	
	Malaxator	
	Oil expeller	
	Vertical centrifuge machine	
	Oil storage tank with heater	
	Induction sealer	
	Bottle filling machine	
Onion Flakes/Powder	Onion Grader	Solar Dryer
	Onion Peeler	
	Compressor	
	Conveyor	
	Vacuum Packaging unit	
	Ball Mill/ Hammer Mill with cyclone	
	Form, Fill and Seal Machine	
	Vegetable Slicer	
	Blancher	
	Colloidal mill	
	Liquid Filling Machine	
Frozen Peas	Product Feeding Conveyor	
	Continues online washer	
	Pea Podder	
	Continues Online blancher	
	Sorting/manual inspection conveyor	

	Product Elevator Conveyor	
	Vibratory screen Conveyor	
	Blast Freezer	
	Metal Detector	
	Control Panel	
	Packaging machine	
Frozen cut vegetables	Product Feeding Conveyor	
	Continues online washer	
	Pea Podder and vegetable slicer	
	Continues Online blancher	
	Sorting/ manual inspection conveyor	
	Product Elevator Conveyor	
	Vibratory screen Conveyor	
	Blast Freezer	
	Metal Detector	
	Control Panel	
	Packaging machine	
Potato French Fries	Reel Machine	Grinding Machine
	Separator	
	Emery Ruler Machine	
	Elevator	
	Plant Separator	
	Vibro Purifier	
	High Pressure Fan	
	Finisher Machine	
	Ekoter Machine	
	Spices Mixer	
	Pneumatic Packing Machine	
Potato Chips	Bubble Washer	Grinding Machine
	Potato Peeler	
	Vegetable Cutter	
	Blanching Unit	
	Deepfat Frying Unit	
Tomato ketchup	Tomatoes Washer	
	Blancher	
	Fruit Pulper	
	Pasteuriser with Boiler	
	Mixing Tank	
	Vacuum Pan / Stem Kettle	
	Ketchup Packing Machine	

Animal Feed	Cattle Feed Batch mixer	
	Cattle Feed Grinder	
	Cattle Feed Screw Conveyer	
	Cattle Feed Pellet Making machine	
	Packing Machine	
Mixed Vegetable Pickle	Bubble Washer	
	Vegetable Slicer	
	Spice Grinder	
	Mixing tank	
	containers	
	Packing Machine (Pouch)	
Petha	Bubble Washer	Water Storage Tank
	Peelar	Stove or burner
	Soaking Tank	
	Dice cutting machine	
	Iron Karahi	
Dehydrated pear	Washing tank	Cold store
	Blanching kettle	Batch coding machine
	Fruit Pitting machine	
	Solar dryer	
	Pulverizer	
	Centrifugal sifter with screens	
	Induction sealer	
	Shrink tunnel	
	Cont. sealing machine	
Dehydrated Okra	Cold store	Continuous sealing machine
	Rotary type washing machine	
	Vegetable cutter/slicer	
	Blanching kettle Gas operated	
	Dryer	
	Induction sealer	
	Shrink tunnel	
	Batch coding machine	
Poultry Feed	Grain Cleaning machine	Counter Flow cooler
	Hammer Mill	Conveyor System
	Mixer Mill	Boiler
	Pellets Mill	
	Packing machine	
Green Chilly Paste	Vegetable washing trough	Batch coding machine
	Vegetable grinder	Cold store

	Blending/mixing tank	
	Induction sealer	
	Shrink tunnel	
	Pouch filling Unit	
Mandarin Orange Marmalade	Washer	
	Pulper	
	Shredder	
	Kettle	
	Bottle Filler	
	Capping & labelling m/c	
	Boiler	

Bakery Products	Dough Kneader, bread slicing machine, batter depositer machine, weighing scale, dough sheeter, rotary biscuit cutter.	Dough feeder, impulse sealer, tunnel oven, cake icing and decorating machine
	mixer machine (batter/dough mixer)	
	moulding frames	
	thermal chamber	
Milk Based Products	Bulk Cooler, Insulated tanks, Pasteurizer unit, Cream Separator, homogenizer, Clarifier, churner, steam jacketed kettle, pouch filling machine, retort machine	Bottle filling machine
Ghee		
Peda		
Soyabean Based Products	Storage silos, blender machine, extruder machine, dryer, cooling conveyer, automatic weighing and packaging machine	
Rice Based Products	Paddy cleaning machine Washing tank paddy roaster paddy dehulling machine	vibratory feeder abrasive whitening machine, thickness grader length grader
	Flaking machine, flake grading machine Puff rice making machine, soaking vessels, digital weighing machine, packaging machine, pouch packing machine	
Katarni Rice	Storage silo, paddy cleaner, destoner, paddy husker. paddy separator, rotary sifter, rice polisher, packaging machine	vibratory feeder, abrasive whitening machine, thickness grader, length grader, colour sorter
Kala Namak Rice	Storage silo, paddy cleaner, destoner, paddy husker. paddy separator, rotary sifter, rice polisher, packaging machine	vibratory feeder, abrasive whitening machine, thickness grader, length grader, colour sorter
Black Rice	Storage silo, paddy cleaner, destoner, paddy husker. paddy separator, rotary sifter, rice polisher, packaging machine	vibratory feeder, abrasive whitening machine, thickness grader, length grader, colour sorter
RED Rice Based Product	Storage silo, paddy cleaner, destoner, paddy husker. paddy separator, rotary sifter, rice polisher, packaging machine	vibratory feeder, abrasive whitening machine, thickness grader, length grader, colour sorter
Maize	Husking machine, desilking machine, corn kernel remover machine, gravity separator, retort machine, food grade conveyor, dough mixer, extruder, noodle making machine, noodles steamer machine,	Noodles stacking machine, cooling conveyer

	dryer, fryer, storage silo, popcorn making machine, popcorn seasoning machine, filling and packaging machine	
Gram based products	Storage silos, dehusker, lantil splitting machine, pulse grader, destoner, magnetic seperator, screw conveyor, bucket elevator, vibrating pre- cleaner, pulverizer mill, flour sifter machine, filling and packaging machine. Weighing machine, dough mixer, extruder machine, fryer, packaging	Horizontal cyclone seperator, sieve vibrator
Red Gram	Rotary screen grader and cleaner, Storage silos, horizontal cyclone seperator, dehusker, lantil splitting machine, pulse grader, destoner, magnetic seperator, screw conveyor, vibrating pre-cleaner, pulverizer mill, flour sifter machine, filling and packaging machine, dryer, disc runner machine, gota seperating machine, polisher	Bucket elevator
Wheat Based Products	Storage silo, vibrating pre cleaner, pulverzer mill, meganetic separator, aspirator, destoner, disc seperator, scourer, impact antolator, flour sifter machine, flour packaging machine,	Blending machine
	dough mixer, extruder, dryer, pasta making machine, dalia grinding machine.	
Kholar (Rajma) products	rajma pre cleaner machine, rajma grading machine, gravity seperator, magnetic destoner, storage silo, grain and packaging machine	colour sorter
Isabgol	cleaner, rubber polisher, aspirator, seiver, grader, pin mill, dehusking machine, husk seperator, kneumatic conveyor, hammer mill, roller mill, ultra fine ginder, powder cone mixer, weighing and packaging machine	centrifuge
Moth (Bhujia, namkeen, papad snacks)	weighing machine, seive vibrator, dough mixer, extruder, fryer, sheeting and cutting machine, papad dryer machine, packaging machine	
Lentil	soaking and cleaning machine, magnetic seperator, destoner, sorting machine, metal detactor conveyor, rottary drum dryer, milling machine, polishing machine, colour sorter, packaging machine, industrial fryer machine	Automatic pulse cleaning machine, tray dryer
Amaranthas	Cutting machine, sautiner, dough mixer, automatic liquid filling machine, seed cleaning	Blending machine
	machine, roasting machine, automatic dye machine, packaging machine	
Palm Products	palm fruit thresher, sterilisation cylinder, palm fruit digester, oil extractor, screw conveyor, oil extractor, , oil filteration machine, palm oil press, dryer,	circulating vibrating screener, oil clarification machine

	vacuum dryer, desender, oil packaging machine	
Urad Based Products	weighing machine, seive vibrator, dough mixer, extruder, fryer, sheeting and cutting machine, papad dryer machine, packaging machine	colour sorter
Sesame seeds	cleaning & sorting machine, seed grader, hulling machine, subsidence type automatic seperator, destoner, magnetic seperator, dryer, roaster, packaging machine, colour sorter.	
Marine Products	vacuum packaging machine, cold storage, gutting machine, wash master, scale master, air freezer with rotary drum	blast freezer
Fish Products	vacuum packaging machine, cold storage, gutting machine, wash master, scale master, freezer with rotary drum	blast freezer
Mussels	Vacuum packaging machine, cold storage, gutting machine, wash	blast freezer
	master, scale master, freezer with rotary drum, fryer, steamer, plate freezer, tunnel freezer, block ice maker, dryer, cooker machine, exhaust box line, can seamer or sealing machine, retort machine.	
Oil Seed Based Products	palm fruit thresher, sterilisation cylinder, palm fruit digester, oil extractor, screw conveyer, oil extractor, oil filtration machine, palm oil press, dryer, vacuum dryer, desender, oil packaging machine, vibrating sieve, destoner, dehuller, flaker, cooker, oil presser	circulating vibrating screener, magnetic drum, oil clarification machine
Edible Oil (Groundnut)	vibratory preclener machine, decorticator machine, cross tube boiler, oil expeller, oil filter press, bottle filling machine, screw conveyer, collection tank/silo,	
	master, scale master, freezer with rotary drum, fryer, steamer, plate freezer, tunnel freezer, block ice maker, dryer, cooker machine, exhaust box line, can seamer or sealing machine, retort machine.	
Oil Seed Based Products	palm fruit thresher, sterilisation cylinder, palm fruit digester, oil extractor, screw conveyer, oil extractor, oil filtration machine, palm oil press, dryer, vacuum dryer, desender, oil packaging machine, vibrating sieve, destoner, dehuller, flaker, cooker, oil presser	circulating vibrating screener, magnetic drum, oil clarification machine
Edible Oil (Groundnut)	vibratory preclener machine, decorticator machine, cross tube boiler, oil expeller, oil filter press, bottle filling machine, screw conveyer, collection tank/silo,	

Groundnut based products	decorticator machine, continous flow dryer, peanut cleaning machine, seasoning machine, roaster, blister, defrying, groundnut grader, weighing and packaging machine, puller mixture tank, cooling conveyor belt, storage hopper, canning machine, milling machine, paste mixing	colour sorter,solvent extractor
	tank, storing and feeding machine, roster oven, oil expeller, oil filter machine	
MFP Based Products	Weighing machine, sieveing, oil expeller, Oil Filter Press, Gravity Separator, Food Grade Conveyor, Drying Machine, Packaging machine, Bottling machine	clarifier
Mahua	Seed or flower cleaner, Dryer, Grinding machine, screw type oil expeller, Three Stage Cooler, Oil Filter Press, Bottling or packaging machine	clarifier
Honey	Honeycomb with Extractor, Heating machine, Stirrer jacketed tank, Kettle, Mesh Filter press machine, Pasteurizer, bottling machine, packaging machine	dehumidifier
Makhana (Foxnut)	Thresher, Cleaner, Grader, Dryer, Roating and Popping Machine, Packaging Machine	
Harra	Weighing machine, sieveing, oil expeller, Oil Filter Press, Food Grade Conveyor, Drying Machine, Packaging machine, Bottling machine	gravity seperator, clarification machine
Bamboo Shoot	dipping tank, Drum dryer, Hot press machine, cold press machine, Canning machine, Labelling and packaging machine	slicer, grader
Chilli	Destoner, Dry cleaner, Crusher, Milling machine, Vibro sifter, Packing machine	sterilizer, triple blender
Sugarcane Products	Extractor, filter press machine, Steam Jacketed Kettle/Boiler, Tray, Drying machine and packaging machine	centrifuge
Walnut	shell Cracker, grader, sorter, Packaging machine	washer,dryer
Betel Vine	Weighing machine, Grinding, Distillation unit, Food Grade Conveyor, Packaging machine, Bottling machine	sieving
Lemon Grass (Aromatic Plant)	Weighing machine, Grinding, Distillation unit, Food Grade Conveyor, Packaging machine, Bottling machine	sieving
Mentha/Mint	Cleaner, Dryer, Grinding, Steam Distillation, Rotary Tablet Press, Packaging Machine	Mixer, moulder or shaper, tableting machine
Jaggery	Sugarcane juicer, Steam jakated kettle/Normal kettle, Trays	
Tea Products	Dryer, Tea Middleton Sorter, Sorter, Packing	Tea steamer

	Machine	
Coriander	Destoner, Dry cleaner, Crusher, Milling machine, Ribbon blender, Vibro sifter, Packing machine	Sterelizer
Cumin		
Spices		
Chironjee	Cleaner, Dryer, Desheller, Grader, Packaging Machine	Decorticator
Byadagi Chillies	Destoner, Dry cleaner, Crusher, Milling machine, Vibro sifter, Packing machine	Sterilizer, Ribbon blender
Garlic	Grinder, Mixer/Blender, Kettle	SS water bath
Mizo Chilli	Destoner, Dry cleaner, Crusher, Milling machine, Vibro sifter, Packing machine	Sterilizer, Ribbon blender
Fennel	centrifugal blower, Boiler, Extractor and Steam distillation unit, Boiler materials with a perforated sieve, Distillation kettle, Packaging machine	condenser, seperator, grader
Fenugreek	Seed cleaner, gravity separator, destoner, Thresher, grader, Dryer, packaging machine, Grinder	
Redcherry Pepper (Dalley Khorsani)	Washer, Sorting conveyer, Hot Air/	steam jacketed bath
	Vaccum Drying, Grinding, Packaging	
Asafoetida	Cleaner, Blender, Grinder, Filling and packaging machine	Drum Sieving
Basil	Cleaning bath, Grinding, Distillation unit, Food grade Conveyor, Packaging machine, Bottling machine	sieveing
Chicory	Washer & Cleaner, Slicer, Oven and Dryer, Roaster, Mixer, Packaging Machine	grinder
Tejpata	Cleaner, Dryer, Seiving, packaging machine	Grinder
Rose	Cleaner, Boiler, Filler and capping machine, Hot air oven, Sugar syrup kettle, Freezer, Packaging machgine	Wine fermenting tank

Additional List of Equipment

Sub Sector wise Recommended List of Equipments

Sr. No	Sub-Sector	Equipment Name	Minimum number of Equipment required (per batch of 20 trainees)
1	Bread and Bakery	Lab Scale Oven	1
2	Bread and Bakery	Baking sheet & Racks	2
3	Bread and Bakery	Commercial Mixers	2
4	Bread and Bakery	Whiskers	2
5	Bread and Bakery	Refrigerator	1
6	Bread and Bakery	Dough Slicer	1
7	Bread and Bakery	Cake Decorative Tools	2
8	Bread and Bakery	Knives	2
9	Bread and Bakery	Spatula	2
10	Bread and Bakery	Mixing bowl	3
11	Bread and Bakery	Measuring Cups & spoons	1
12	Bread and Bakery	Thermometer	2
13	Bread and Bakery	Timer	2
14	Bread and Bakery	Digital Hygrometer	1
15	Bread and Bakery	Packing Wraps and Rolls	1
16	Bread and Bakery	Aprons	20
17	Bread and Bakery	Cleaning tools	1
18	Bread and Bakery	Weighing Scale	2
19	Bread and Bakery	Gas Burner (LPG)	1
20	Bread and Bakery	LPG cylinders	3
21	Bread and Bakery	Heat resistant Gloves, Protective Gloves	1
22	Bread and Bakery	Gloves	20
23	Bread and Bakery	Fire extinguishers	2
24	Bread and Bakery	High speed exhausts	4
25	Bread and Bakery	Masks – Head cover, mouth cover	30
26	Bread and Bakery	Packaging Material	1
27	Bread and Bakery	Refrigerator	1
28	Bread and Bakery	Industrial Scale Ovens	1
29	Bread and Bakery	Baking Sheet & Racks	2
30	Bread and Bakery	Commercial Mixers	2
31	Bread and Bakery	Wire Whiskers	2
32	Bread and Bakery	Fryer	1
33	Bread and Bakery	Baking Pan	2
34	Bread and Bakery	Cooling Racks	2
35	Bread and Bakery	Bread Slicer Manual/ Mechanical	1
36	Bread and Bakery	Knives	2

37	Bread and Bakery	Spatula	2
38	Bread and Bakery	Utensils	5
39	Bread and Bakery	Mixing Bowl	2
40	Bread and Bakery	Work Table	3
41	Bread and Bakery	Sinks	2
42	Bread and Bakery	Measuring Cup & Spoon	2
43	Bread and Bakery	Thermometer	3
44	Bread and Bakery	Timer	2
45	Bread and Bakery	Digital Hygrometer	1
46	Bread and Bakery	Lab Equipment For Testing	1
47	Bread and Bakery	Lab Chemicals For Testing And Glassware	1
48	Bread and Bakery	Aprons	20
49	Bread and Bakery	Cleaning Tools	1
50	Bread and Bakery	Weighing Scale	1
51	Bread and Bakery	Gas Burner (LPG)	1
52	Bread and Bakery	LPG Cylinders	2
53	Bread and Bakery	Heat Resistant Gloves, Protective Gloves	2
54	Bread and Bakery	Fire Extinguishers	2
55	Bread and Bakery	High Speed Exhausts	2
56	Bread and Bakery	Masks – Head Cover, Mouth Cover	20
57	Bread and Bakery	Packing, Wraps Rolls	1
58	Bread and Bakery	Bread Slicer Manual/Mechanical	2
59	Dairy Processing	Pasteurizer	1
60	Dairy Processing	Homogenizer	1
61	Dairy Processing	Refrigerator	1
62	Dairy Processing	Spray Dryer	1
63	Dairy Processing	Blender	1
64	Dairy Processing	Churner	1
65	Dairy Processing	Measuring Cup & spoon (100 ml and 250 ml)	2
66	Dairy Processing	Thermometer	3
67	Dairy Processing	Separator/Clarifier	1
68	Dairy Processing	Knives	2
69	Dairy Processing	Spatula	2
70	Dairy Processing	Utensils	5
71	Dairy Processing	Work table	2
72	Dairy Processing	Sinks	2
73	Dairy Processing	Timer	2
74	Dairy Processing	Digital Hygrometer	2
75	Dairy Processing	Bunsen Burner	1
76	Dairy Processing	Wire Gauze	2
77	Dairy Processing	Test Tubes	5
78	Dairy Processing	Burette	3
79	Dairy Processing	Pipette	3
80	Dairy Processing	Lab chemicals for testing and glassware	1
81	Dairy Processing	Weighing Scale	1

82	Dairy Processing	Gas Burner (LPG)	1
83	Dairy Processing	LPG cylinders	2
84	Dairy Processing	pH Meter	1
85	Dairy Processing	Muslin Cloth	3
86	Dairy Processing	Disinfectant	1
87	Dairy Processing	Fire extinguishers	2
88	Dairy Processing	Masks – Head cover, mouth cover	20
89	Dairy Processing	Gloves	20
90	Dairy Processing	Lab Coat	30
91	Dairy Processing	Measuring Cups	3
92	Dairy Processing	Feeder	1
93	Dairy Processing	Silos	1
94	Dairy Processing	Mixer	1
95	Dairy Processing	Milk Sampling Bottles	3
96	Dairy Processing	Measuring Cylinder	2
97	Dairy Processing	Funnel	3
98	Dairy Processing	SNF Tester	1
99	Dairy Processing	Fat Tester	1
100	Dairy Processing	Ice Cream Freezer	1
101	Dairy Processing	Mixing Tank With Agitator	1
102	Dairy Processing	Filling Machine	1
103	Fruits and Vegetables Processing	pH Meter (Digital)	1
104	Fruits and Vegetables Processing	Thermometer (Digital)	1
105	Fruits and Vegetables Processing	Beakers	2
106	Fruits and Vegetables Processing	Conical flasks	2
107	Fruits and Vegetables Processing	Measuring cylinder	2
108	Fruits and Vegetables Processing	Measuring flask	2
109	Fruits and Vegetables Processing	Burette with burette stands	1
110	Fruits and Vegetables Processing	Pipettes of assorted sizes	2
111	Fruits and Vegetables Processing	Test tubes with test tube stand	20
112	Fruits and Vegetables Processing	Glass rod	6
113	Fruits and Vegetables Processing	Petri dish with cover	12
114	Fruits and Vegetables Processing	Glass slides	1
115	Fruits and Vegetables Processing	Microscope - 1	1
116	Fruits and Vegetables Processing	Weighing balance (Digital)	1
117	Fruits and Vegetables Processing	Brix meter/refractometer -	2
118	Fruits and Vegetables Processing	Deep fridge -	1
119	Fruits and Vegetables Processing	Refrigerator	1
120	Fruits and Vegetables Processing	Gas burner with cylinder	1
121	Fruits and Vegetables Processing	Fruit tray	6
122	Fruits and Vegetables Processing	Cutting knives	6
123	Fruits and Vegetables Processing	Electric mixer	1
124	Fruits and Vegetables Processing	Pressure cooker	1
125	Fruits and Vegetables Processing	Coring knives	6
126	Fruits and Vegetables Processing	Pitting knives	6

127	Fruits and Vegetables Processing	Juice Extractor (Screw type)	1
128	Fruits and Vegetables Processing	Pulper Electric	1
129	Fruits and Vegetables Processing	Hygrometer	1
130	Fruits and Vegetables Processing	Mechanical peeler/ Batch type for fruit and vegetable peeling	1
131	Fruits and Vegetables Processing	Steam jacket kettle	2
132	Fruits and Vegetables Processing	Baby Boiler/Diesel fuel/	1
133	Fruits and Vegetables Processing	Sulphuring chamber	1
134	Fruits and Vegetables Processing	Auto claves	1
135	Fruits and Vegetables Processing	Lab Coat	20
136	Fruits and Vegetables Processing	Gloves and Head Cover	20
137	Fruits and Vegetables Processing	S.S.Vessels with lids	2
138	Fruits and Vegetables Processing	S.S. Vessels with lids	2
139	Fruits and Vegetables Processing	pH Meter	1
140	Fruits and Vegetables Processing	Thermometer	1
141	Fruits and Vegetables Processing	Brinometer	2
142	Fruits and Vegetables Processing	Hydrometer	1
143	Fruits and Vegetables Processing	Hygrometer	1
144	Fruits and Vegetables Processing	Brix meter/refractometer	1
145	Fruits and Vegetables Processing	Deep Fridge	1
147	Fruits and Vegetables Processing	Fruit slicing machine	1
148	Fruits and Vegetables Processing	Can Sealing Machine	1
150	Fruits and Vegetables Processing	Gloves	20
151	Fruits and Vegetables Processing	Head Cover	20
152	Fruits and Vegetables Processing	Fire Extinguisher	1
153	Fruits and Vegetables Processing	PH Meter (Digital)	1
154	Fruits and Vegetables Processing	Beakers of different sizes	2
159	Fruits and Vegetables Processing	Glass funnels of assorted sizes	6
160	Fruits and Vegetables Processing	Petri dish with cover	12
161	Fruits and Vegetables Processing	Microscope	1
163	Fruits and Vegetables Processing	Weighing balance (Digital with capacity upto 50 kg)	1
165	Fruits and Vegetables Processing	Stainless steel mug	2
166	Fruits and Vegetables Processing	Water Bath	1
167	Fruits and Vegetables Processing	Sealing machine	1
168	Fruits and Vegetables Processing	Oven (drying)	1
169	Fruits and Vegetables Processing	Solar dryer (cabinet type) complete with solar box. Size app 6'*3'	1
170	Fruits and Vegetables Processing	Baby Boiler/Diesel fuel/capacity of boiler as per capacity of steam jacket kettle	1
172	Fruits and Vegetables Processing	Heat Sealing Machine Hand Operated	1
173	Fruits and Vegetables Processing	Moisture meter	1
174	Fruits and Vegetables Processing	pH Meter	1
175	Fruits and Vegetables Processing	Sorting Table	3
176	Fruits and Vegetables Processing	Conveyor Belt	1
177	Fruits and Vegetables Processing	Fruits and Vegetables Grading Machine	1

178	Fruits and Vegetables Processing	Bricks meter/refractometer -	2
179	Fruits and Vegetables Processing	Bucket	3
180	Fruits and Vegetables Processing	Sealing Machine	1
181	Fruits and Vegetables Processing	Shrink Wrap Machine	1
191	Fruits and Vegetables Processing	Refrigerator	1
192	Fruits and Vegetables Processing	Knife	3
193	Fruits and Vegetables Processing	Trays	5
194	Fruits and Vegetables Processing	Work Table	2
202	Fruits and Vegetables Processing	Head and Face Mask	20
203	Fruits and Vegetables Processing	Sanitizers	2
205	Fruits and Vegetables Processing	S.S.Vessels With Lids	2
206	Fruits and Vegetables Processing	Ph Meter (Digital)	1
207	Fruits and Vegetables Processing	Thermometer (Digital)	1
208	Fruits and Vegetables Processing	Beakers	6
209	Fruits and Vegetables Processing	Conical Flasks	6
210	Fruits and Vegetables Processing	Measuring Cylinder	6
211	Fruits and Vegetables Processing	Utensils	5
212	Fruits and Vegetables Processing	Measuring Flask	6
213	Fruits and Vegetables Processing	Burrete With Burrete Stands	1
214	Fruits and Vegetables Processing	Pipettes Of Assorted Sizes	6
215	Fruits and Vegetables Processing	Glass Funnels	6
217	Fruits and Vegetables Processing	Brinometer	2
219	Fruits and Vegetables Processing	Weighing Balance (Digital)	1
220	Fruits and Vegetables Processing	Laboratory Weighing Balance (Digital) - 1 Pc	1
221	Fruits and Vegetables Processing	Brix Meter/Refractometer	2
222	Fruits and Vegetables Processing	Refrigerator	1
223	Fruits and Vegetables Processing	Gas Burner With Cylinder	1
224	Fruits and Vegetables Processing	Stainless Steel Mug	2
225	Fruits and Vegetables Processing	Cutting Knives And Peeler	3
226	Fruits and Vegetables Processing	Electric Mixer	1
227	Fruits and Vegetables Processing	Water Tank	1
228	Fruits and Vegetables Processing	Fruit Slicing Machine	1
229	Fruits and Vegetables Processing	Sealing Machine	1
230	Fruits and Vegetables Processing	Weighing Balance (Analogue)	1
231	Fruits and Vegetables Processing	Seam Checking Gauge Or Screw Gauge	1
232	Fruits and Vegetables Processing	Pressure Cooker	1
233	Fruits and Vegetables Processing	Coring Knives	3
234	Fruits and Vegetables Processing	Pitting Knives	3
235	Fruits and Vegetables Processing	Pilfer Proof Capping Machine	1
236	Fruits and Vegetables Processing	Juice Extractor (Screw Type)	1
237	Fruits and Vegetables Processing	Lime Juice Extractor & Orange Juice Halving & Burring	1
238	Fruits and Vegetables Processing	Crown Corking Machine Hand Operated	1
239	Fruits and Vegetables Processing	Pulper Electric	1
240	Fruits and Vegetables Processing	Fruit Mill	1

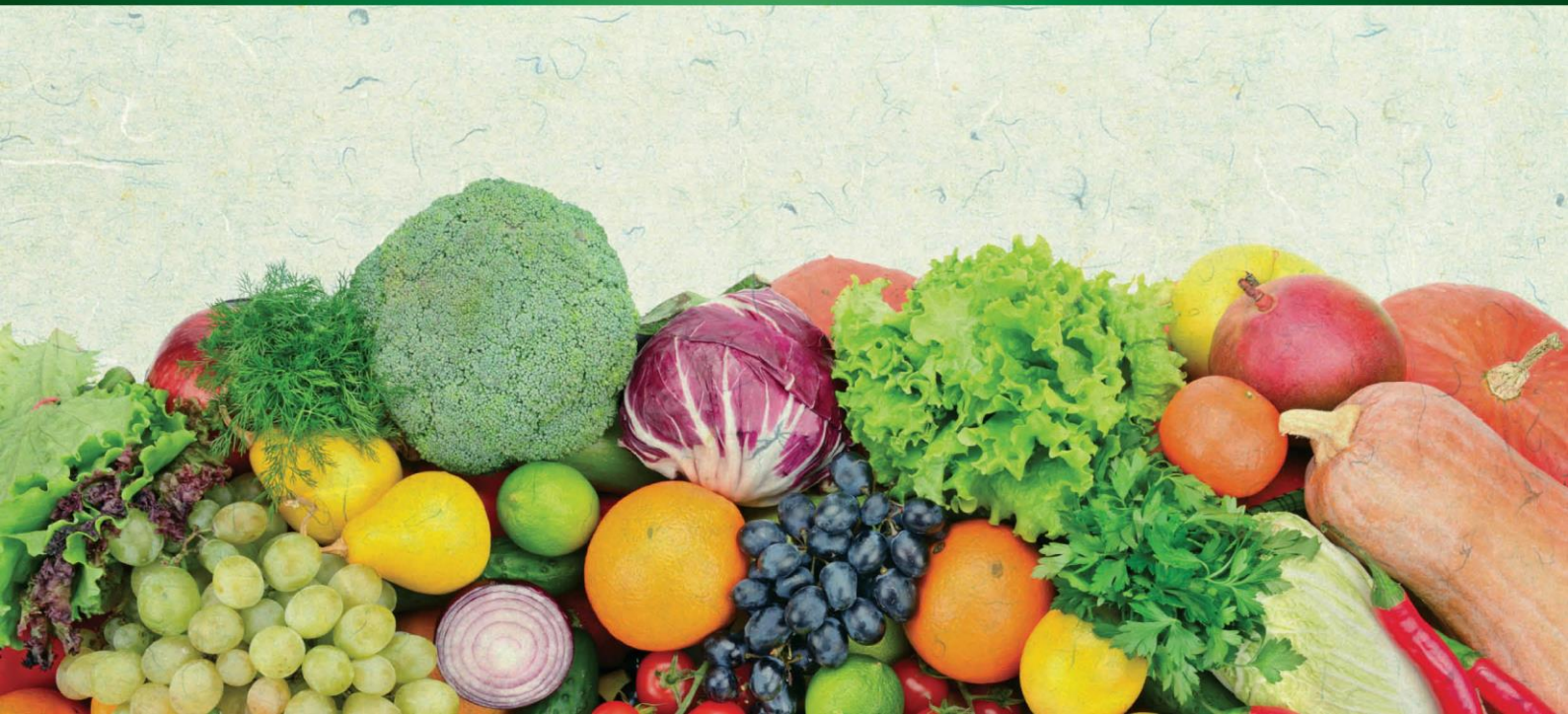
241	Fruits and Vegetables Processing	Mechanical Peeler/ Batch Type For Fruit And Vegetable Peeling	1
242	Fruits and Vegetables Processing	Steam Jacket Kettle	2
243	Fruits and Vegetables Processing	Baby Boiler/Diesel Fuel	1
244	Fruits and Vegetables Processing	Exhausting Box	1
245	Fruits and Vegetables Processing	Sulphuring Chamber	1
246	Fruits and Vegetables Processing	Shredder For Slicing Of Fruit And Vegetable	1
247	Fruits and Vegetables Processing	Liquid Filling Machine	1
248	Fruits and Vegetables Processing	Auto Claves	1
249	Fruits and Vegetables Processing	S.S. Vessels With Lids	2
250	Fruits and Vegetables Processing	Micrometer Seam Checking Gauge	1
251	Fruits and Vegetables Processing	Bottle Brush Washer	1
252	Fruits and Vegetables Processing	Burrete with Stands	1
253	Fruits and Vegetables Processing	Test Tubes with Stand	10
254	Fruits and Vegetables Processing	Glass Rod	6
255	Fruits and Vegetables Processing	Glass Slides	1
256	Fruits and Vegetables Processing	Microscope – 1	1
257	Fruits and Vegetables Processing	Hydrometer	2
258	Fruits and Vegetables Processing	Fruit Tray	2
259	Fruits and Vegetables Processing	Stainless Steel Mug	2
260	Fruits and Vegetables Processing	Cutting Knives	3
261	Fruits and Vegetables Processing	Peelers	3
262	Fruits and Vegetables Processing	Weighing Balance (Analogue)	1
263	Fruits and Vegetables Processing	Pickle Mixer, Rotary Type And Contact Part Of Stainless Steel	1
264	Grain Milling	Husker	3
265	Grain Milling	Scourer	1
266	Grain Milling	Magnetic separator	1
267	Grain Milling	De-Stoner	1
268	Grain Milling	Moisture Metre	1
269	Grain Milling	Sifting Machine	1
270	Grain Milling	Sealer	1
271	Grain Milling	Hammer Mill	1
272	Grain Milling	Head Cover	20
273	Grain Milling	Sieves	3
274	Grain Milling	Aspirator	1
275	Grain Milling	Gloves	20
276	Grain Milling	Samples of various Pulses	2
277	Grain Milling	Cleaner/grader	1
278	Grain Milling	Conditioning machine	1
279	Grain Milling	De-husk machine	1
280	Grain Milling	Polisher	1
281	Grain Milling	Drier	1
282	Grain Milling	Packaging machine (Sealer)	1
283	Grain Milling	Packing Wrap Rolls	1
284	Grain Milling	Grinding machine	1

285	Grain Milling	Sifter	1
286	Grain Milling	Lab Coat	20
287	Grain Milling	Mask and head Cover	20
288	Grain Milling	Cleaners	2
289	Grain Milling	Expeller	1
290	Grain Milling	Hygrometer	1
291	Grain Milling	Hydroclones	1
292	Grain Milling	Sieving Machine	1
293	Grain Milling	Conveyor	1
294	Grain Milling	Drying Machine	1
295	Grain Milling	Packaging Machine	1
296	Grain Milling	Protective Gloves	20
297	Grain Milling	Head Caps	20
298	Grain Milling	Mouth Mask	20
299	Grain Milling	Stunning Machine	20
300	Grain Milling	Cleaver	3
301	Fish and Marine Processing	Refrigerator	1
302	Fish and Marine Processing	Scaling machine	1
303	Fish and Marine Processing	Skin Peeling Machine	1
304	Fish and Marine Processing	Grounding machine	1
305	Fish and Marine Processing	Gutting machine	1
306	Fish and Marine Processing	Hygrometer	1
307	Fish and Marine Processing	Trays	4
308	Fish and Marine Processing	Sanitizer and Disinfectant	2
309	Fish and Marine Processing	Lab Coat	20
310	Fish and Marine Processing	Hand Gloves	20
311	Fish and Marine Processing	Mouth and Head Cover	30
312	Fish and Marine Processing	Heat sealers	2
313	Fish and Marine Processing	Cutting / slitting / trimming equipment	2
314	Fish and Marine Processing	Typing / sieving/ stapling equipment	1
315	Fish and Marine Processing	Closing / sealing equip	1
316	Fish and Marine Processing	Wrappers	2
317	Fish and Marine Processing	Labellers	1
318	Fish and Marine Processing	Coding equipment	1
319	Fish and Marine Processing	Metal detection equipment	1
320	Fish and Marine Processing	Printing equipment	1
321	Fish and Marine Processing	Container cleaning/ washing/ drying systems	1
322	Meat and Poultry Processing	Grinder and Saw	1
323	Meat and Poultry Processing	Meat Cutter	1
324	Meat and Poultry Processing	De Boner	1
325	Meat and Poultry Processing	Sterilizer	1
326	Meat and Poultry Processing	Bleeding Cones	1
327	Meat and Poultry Processing	Scalding Machine	1
328	Meat and Poultry Processing	Feather Picking Machine	1
329	Meat and Poultry Processing	Incubator	1

330	Meat and Poultry Processing	Tray Washer	1
331	Meat and Poultry Processing	Brooder	1
332	Meat and Poultry Processing	Refrigerator	1
333	Meat and Poultry Processing	Knife	1
334	Meat and Poultry Processing	Trays	1
335	Meat and Poultry Processing	Work Table	3
336	Meat and Poultry Processing	Water spraying machine	5
337	Meat and Poultry Processing	De-Sliming Machine	2
338	Meat and Poultry Processing	Head Splitter	1
339	Meat and Poultry Processing	Intestine Processing Machine	1
340	Meat and Poultry Processing	Lab Chemicals	1
341	Meat and Poultry Processing	Conveyor	1
342	Meat and Poultry Processing	Crusher	1
343	Meat and Poultry Processing	Lab Coat	1
344	Meat and Poultry Processing	Head and Face Mask	1
345	Meat and Poultry Processing	Gloves	20
346	Meat and Poultry Processing	Pulveriser	20
347	Spice Processing Technician	Sifter	1
348	Spice Processing Technician	Grinding machine/Pulverizer	1
349	Spice Processing Technician	Pounding Machine	1
350	Spice Processing Technician	De-Stoner	1
351	Spice Processing Technician	Roaster	1
352	Spice Processing Technician	Dryer	1
353	Spice Processing Technician	Spice Blender	1
354	Spice Processing Technician	Protective Gloves	1
355	Spice Processing Technician	Head Caps	1
356	Spice Processing Technician	Aprons	20
357	Spice Processing Technician	Safety Goggles	20
358	Spice Processing Technician	Safety Boots	20
359	Spice Processing Technician	Mouth Mask	20
360	Spice Processing Technician	Sanitizer	20
361	Spice Processing Technician	Weighing Scale	20



SOP for Preparation, Translation and Review of Content



SOP- FOR THE CAPACITY BUILDING DEMONSTRATION VIDEOS

General Instructions	<ol style="list-style-type: none"> 1. Real time video with minimum resolution - HD with 720p (1280x720) 2. The process demonstration segment must play for 75% of the total video duration. 3. Font: Arial/ Helvetica, Font Size: 22-32 to be used appropriately for captions and subtitles. 4. Demonstration must adopt to clean premises, clean equipment and personal involved must follow hygiene, proper clothing, hand gloves, hair net, apron, no jewelry policy, mask, safety shoes/foot gloves. 5. Prevention from COVID-19 standpoint should be mentioned 6. There should not be any repetition of footages in the video. 7. Watermark of PMFME Scheme throughout the video 8. Logos of MoFPI and IIFPT/NIFTEM must be in all frames 9. Copy right footages/images should not be used, if used, proper permission must be obtained and submitted with the video.
Opening Frame (Refer Template 1)	<ul style="list-style-type: none"> • MoFPI logo – Background less (Top Left) • PM FME logo – Background less (Centre Top) • Logo of the Institution of IIFPT/NIFTEM – Background less (Top Right) • <u>‘Title of the video with product image’</u> • PM Formalization of Micro Food Processing Enterprises Scheme • ATMANIRBHAR BHARAT ABHIYAN • Following texts should be played as voice over with good quality <p><i>‘Hello Everyone, On the behalf of Indian Institute of Food Processing Technology/National Institute of Food Technology Entrepreneurship and Management under Ministry of Food Processing Industries, I welcome you all for the video demonstration session on <u>Video Title</u> under capacity building component of PM FME Scheme’.</i></p>

Frame 2	<p>Video Map (This is a brief description about the contents of the video with timestamps so that a viewer can skip to a particular section for specific information)</p> <p><u>Example of a timestamp:</u> 00:00 - 00:00 (Beginning timing – End timing)</p> <p><u>Timestamp Headings</u></p> <ul style="list-style-type: none"> • About the video/product (with timestamp) • Market opportunities (with timestamp) • Details of equipment and ingredients used (with timestamp) • Demonstration (with timestamp) • Manpower and investment related information • Mention of FSSAI standards, packaging and labeling (with timestamp) • About PMFME Scheme (with timestamp) • Information about content access • Relevant contact details • Prepared by
Frame 3	Brief introduction of what the video is about and information about the product being featured in the video.
Frame 4	Footages of relevant ingredients (quantity) and equipment along with subtitle.
Frame 5	Detailed video demonstration of process. All the unit operations relevant to the product.
Frame 6	Mention of FSSAI standards, packaging and labeling
Frame 7 (Refer Template 2)	<p>(Information about the PMFME Scheme, website and application process) Following texts should be played as voice over with good quality <i>‘Till now we have seen the processing of ***** demonstration video under PM FME SCHEME. The Ministry of Food Processing Industries, in partnership with the State/UT Governments has launched an all India Centrally Sponsored Prime Minister Formalization of Micro food processing Enterprises Scheme for providing financial, technical, and business support for up-gradation of existing micro food processing enterprises. For more details, please visit our web links given here’.</i></p>
Frame 8 (Refer Template 3)	<p>Contact details Indian Institute of Food Processing Technology Ministry of Food Processing Industries Pudukkottai Road, Thanjavur, Tamil Nadu 613005 Website: http://www.iifpt.edu.in Email: info@iifpt.edu.in Call: +91 4362 228155</p>
Frame 9	Prepared by: <i>Name and address of the agency/firm who prepared the video documentary</i>

SOP FOR THE CAPACITY BUILDING POWER POINT PRESENTATION (PPTs)

- Use Arial font throughout the presentation.
- Use font size 24 point for heading (bold, caps) and 18 for body (sentence case).
- Insert slide numbers
- Use appropriate font colors.
- Scientific names, if used, should be italicised or underlined
- Recent references should be cited for statistical data, scientific information, etc.
- Avoid abbreviations and acronyms.
- Limit punctuation marks.
- No more than 6-8 words per line and no more than 6 lines per slide
- For bullet points, use the 6 x 6 Rule.
- Use dark text on light background or light text on dark background.
- Use design templates, flow charts, info graphs, smart arts, etc.
- Include only necessary information.
- Content should be self-evident
- Images used should be of good resolution without repetitions.
- Use labels when using charts or graphical images to explain the chart or graph.
- Copy right images should not be used, if used, proper permission must be obtained and submitted with the PPT.

The PPT should be arranged in the following order

A. PPT on Process Technology
1. Title slide – Refer to Template 4 *****
2. Description about the given product
3. Variety and types of produce
4. Production, market potential and export of raw material (min. 5 slides)
5. Primary processing/pre-processing (min. 5 slides)
6. Process Technology – must include detailed information on formulation, process flow chart with parameters, unit operations, equipment, process faults/failures and remedies, etc. (min. 10 slides)
7. Nutritional information of finished product
8. Market and export potential of finished product
9. Contact details (Refer to Template 3)
Total Number of Slides- Minimum 25 and Maximum 50

B. PPT on Packaging Technology
1. Title slide – Refer to Template 4 *****
2. Description about the product
3. Principle and types of packaging
4. Material of packaging (min. 6 slides)
5. Features of Packaging (min. 6 slides)
6. Packaging and labelling requirements to be followed for the given product as per FSSAI (min. 6 slides)
7. Contact details (Refer to Template 3)
Total Number of Slides- Minimum 25 and Maximum 50

C. PPT on Food Safety and FSSAI Regulations
1. Title slide – Refer to Template 4 *****
2. General aspects on food safety – Good Hygienic Practices (GHP), Good Manufacturing Practice (GMP) related the raw material/product
3. Introduction about FSSAI
4. Food category system
5. FSSAI registration & licensing process
6. About FoSCOS
7. FSSAI standards for product, food additives, microbiological requirements, contaminants and toxins, pesticides/antibiotics residues, etc. (min. 6 slides)
8. Other national and international standards like BIS, CODEX, etc. (wherever applicable) (min. 5 slides)
9. Contact details (Refer to Template 3)
Total Number of Slides- Minimum 25 and Maximum 50

SOP FOR THE CAPACITY BUILDING – HANDBOOK

General instructions	<ul style="list-style-type: none"> ▪ Use Times New Roman font throughout the document. ▪ Use font size 14 point for heading (bold, caps) and 12 for body (sentence case) ▪ Insert Header- ‘PM FME – Processing of_____’ and Footer-Page Number (Refer Template 5) ▪ Scientific names, if used, should be italicized or underlined ▪ Recent references should be cited for statistical data, scientific information, etc. ▪ Abbreviations and acronyms mentioned should be tabulated after content page ▪ Limit punctuation marks ▪ No more than 24 lines per page with 1.5-line spacing and justified. ▪ Use flow charts, info graphs, smart arts, etc. ▪ Images used should be of good resolution without repetitions. ▪ Use labels when using charts or graphical images to explain the chart or graph. ▪ Handbook should cover aspects on introduction, raw materials, equipment, process, packaging, labelling, food safety, FSSAI and other standards and storage relevant to the product ▪ Copy right images should not be used, if used, proper permission must be obtained and submitted with the document ▪ Content should be plagiarism (max. 25%) checked and report must be provided
First Page (Refer Template 5)	<p>Handbook ‘Name of the Product (Centre Top)’ under PMFME Scheme</p> <p>Image of the Product</p> <p>Address (Below)</p> <p>Indian Institute of Food Processing Technology Ministry of Food Processing Industries Pudukkottai Road, Thanjavur, Tamil Nadu 613005 Website: http://www.iifpt.edu.in Email: info@iifpt.edu.in Call: +91 4362 228155</p>
Page 2	<p>Table of contents</p> <p>1. **** Page No.</p> <p>2. **** Page No.</p>
Total Number of Pages- Minimum 25 and Maximum 100	

SOP FOR THE CAPACITY BUILDING – MODEL DETAILED PROJECT REPORT


General instructions	<ul style="list-style-type: none"> ▪ Use Times New Roman font throughout the document. ▪ Use font size 14 point for heading (bold, caps) and 12 for body (sentence case) ▪ Insert Header- ‘PM FME – Detailed Project Report of _____’ and Footer-Page Number (Refer Template 6) ▪ Scientific names, if used, should be italicized or underlined ▪ Recent references should be cited for statistical data, scientific information, etc. ▪ Abbreviations and acronyms mentioned should be tabulated after content page ▪ Limit punctuation marks ▪ No more than 24 lines per page with 1.5-line spacing and justified. ▪ Use flow charts, info graphs, smart arts, etc. ▪ Images used should be of good resolution without repetitions. ▪ Use labels when using charts or graphical images to explain the chart or graph. ▪ Copy right images should not be used, if used, proper permission must be obtained and submitted with the document ▪ Content should be plagiarism checked and report must be provided ▪ All the figures should be in Rs. ▪ Copy right images should not be used, if used, proper permission must be obtained and submitted with the document ▪ Content should be plagiarism (max. 25%) checked and report must be provided
First Page	<p>Detailed Project Report for ‘Name of the Product (Centre Top)’ under PMFME Scheme</p> <p>Image of the Product</p> <p>Address (Below)</p> <p>Indian Institute of Food Processing Technology Ministry of Food Processing Industries Pudukkottai Road, Thanjavur, Tamil Nadu 613005 Website: http://www.iifpt.edu.in Email: info@iifpt.edu.in Call: +91 4362 228155</p>
Page 2	<p>Table of Contents</p> <p>1. **** Page No.</p> <p>2. **** Page No.</p>

The Detailed project report should cover following aspects:

1. Project Summary
2. About the Product
3. Process Flow Chart
4. Economics of the Project covering:
 - Basis & presumptions
 - i. Capacity & its utilisation
 - ii. Premises/ infrastructure
 - iii. Machinery & equipment
 - iv. Misc. Fixed assets
 - v. Total cost of the project
 - vi. Means of finance
 - vii. Term loan
 - viii. Term loan repayment & interest schedule
 - ix. Working capital calculations
 - x. Salaries/wages
 - xi. Consumables
 - xii. Power/ water
 - xiii. Depreciation calculation
 - xiv. Repairs & maintenance
 - xv. Marketing/selling expenses
 - xvi. Projections of profitability analysis
 - xvii. Break-even-point analysis
 - xviii. Projected balance sheet
 - xix. Cash-flow statement
 - xx. Debt-service coverage ratio
 - xxi. Mention of possible output for the given capacity


Total Number of Pages- Minimum 25 and Maximum 100

Template No. 1



MOFPI IIFPT

GUAVA JUICE



AATMANIRBHAR BHARAT

PM Formalisation of Micro Food Processing Enterprises Scheme (PM FME Scheme)

Template No. 2



MOFPI IIFPT

PM FME Scheme

AATMANIRBHAR BHARAT

PM Formalisation of Micro Food Processing Enterprises Scheme (PM FME Scheme)



A combined resolve of 130 crore citizens is to make India self-reliant. The way ahead lies in LOCAL- Local Manufacturing, Local Markets, Local Supply Chain. Local is not merely a need but a responsibility.

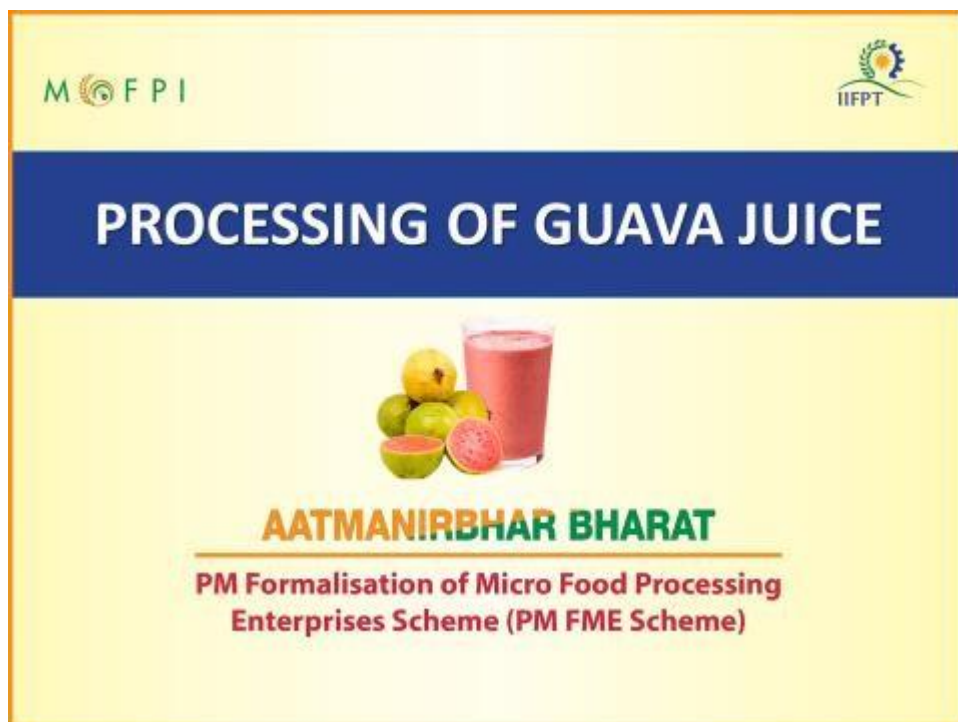
Shri Narendra Modi, Hon'ble Prime Minister

For the details regarding the PM FME scheme, scheme guidelines, various food processing demonstration videos and DPRs, please visit our weblinks:
<http://moftpnic.in/pmfmse>
<http://www.iifpt.edu.in/abi-podfmse.php>

Template No. 3



Template No. 4





PM Formalization of Micro Food Processing Enterprises Scheme

HANDBOOK OF PREPARATION OF KINNOW JUICE



AATMANIRBHAR BHARAT

Indian Institute of Food Processing Technology
Ministry of Food Processing Industries
Pudukkottai Road, Thanjavur, Tamil Nadu 613005
Website: <http://www.iifpt.edu.in>

Email: info@iifpt.edu.in
Call: +91 4362 228155

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1.3	Fruit Beverages	4
Chapter 2: Preparation of Kinnow juice		
2.1	Kinnow	5
2.2	Kinnow juice Processing	6
2.3	Flow Chart for Preparation of Kinnow Juice	8
2.4	Impact of Processing on Kinnow Juice	15
2.5	Role of Ingredients used for Preparation of Juice Beverages	16
Chapter 3: Packaging of Kinnow juice		
3.1	Quality factors That Affects Kinnow juice	24
3.2	Barrier Requirements of Packaging of Juice	25
3.3	Properties of Different Packages	30
Chapter 4: Food Safety Regulations & Standards		
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CHAPTER 1

INTRODUCTION

Template No. 6



**PM Formalization of
Micro Food Processing Enterprises Scheme**

**DETAILED PROJECT REPORT
FOR
PREPARATION OF KINNOW JUICE**



AATMANIRBHAR BHARAT

**Indian Institute of Food Processing
Technology** Ministry of Food Processing
Industries Pudukkottai Road, Thanjavur,
Tamil Nadu 613005 Website:

<http://www.iifpt.edu.in>

Email: info@iifpt.edu.in

Call: +91 4362 228155

TABLE OF CONTENTS

Sr. No.	Topic	Page
1	Project Summary	
2	About the Product	
3	Process Flow Chart	
4	<p>Economics of the Project covering:</p> <ul style="list-style-type: none"> i. Basis & Presumptions ii. Capacity & its utilization iii. Premises/ Infrastructure iv. Machinery & Equipment v. Misc. Fixed Assets vi. Total Cost of the Project vii. Means of Finance viii. Term Loan ix. Term Loan repayment & interest schedule x. Working Capital Calculations xi. Salaries/Wages xii. Consumables xiii. Power/ Water xiv. Depreciation Calculation xv. Repairs & Maintenance xvi. Marketing/Selling Expenses xvii. Projections of Profitability Analysis xviii. Break-even-point Analysis xix. Projected Balance Sheet xx. Cash-flow Statement xxi. Debt-service Coverage Ratio xxii. Mention of possible output for the given capacity 	

PROJECT SUMMARY

INSTRUCTIONS FOR THE REVIEW OF TRANSLATED TRAINING MATERIAL

1. DEMONSTRATION VIDEOS

For videos already available in English:

- The translated voice over should be in accordance with the original content of the video.
- The meaning of the technical jargons used in other language should be as per the original content.
- The voice over should be clearly audible at the same speed as is the English video.
- The timestamp of the voice over in other language should go in line with the demonstration.

For the videos with fresh content prepared for the first time in any language other than English:

- The SOPs issued for the preparation of videos in English to be followed.
- The technical terms should be as per the regional usage and easy to understand.

2. POWER POINT PRESENTATION (PPTs)

- The theme and design of the PPT shall remain same as for English language
- The meaning of the technical jargons used in other language should be as per the original content.
- No extra slide shall be added
- The images shall remain the same as the original ppt.
- Abbreviations and acronyms in other languages should not be there.
- All the labels for charts or graphical images to explain the chart or graph will also be translated

For Voice over in PPTs:

- The voice over should be clearly audible at the same speed as is the English video.
- The translated voice over should be in accordance with the original content of the video.

3. HANDBOOK

- The meaning of the technical jargons used in other language should be as per the original content.
- No extra content shall be added
- The images shall remain the same as the original handbook