सत्यमेव जयते

**FOOD SAFETY AND STANDARDS
AUTHORITY OF INDIA**

Inspiring Trust, Assuring Safe & Nutritious Food

Ministry of Health and Family Welfare, Government of India

Go to Guide for Food Start-Ups

PREFACE

According to the India Brand Equity Foundation (IBEF) 2017 Indian Food Processing report, the Indian food processing industry accounts for 32 percent of the country's total food market. It contributes around 8.8 and 8.4 percent of Gross Value Added (GVA) in Manufacturing and Agriculture, respectively. In addition, it accounts for 13 percent of India's exports and six percent of total industrial investment. As per the 2016-2017 Annual Survey of Industries, there are 37,175 registered food processing units in the country that employ approximately 1.7 million people in food and beverage manufacturing. According to an ASSOCHAM Grant Thorton study, the Indian food processing sector has the potential to attract $33 billion in investment and generate employment for 9 million persons by 2024.

From an overall viewing, India comes across as a thriving under-penetrated consumer driven market with a scope for exponential growth. Internet penetration and its increasing importance are driving most of the businesses. Progressive Government initiatives such as StartUp India, Make in India, Digital India, Atal Innovation Mission, a dedicated Women Entrepreneurship Cell in NITI Aayog and numerous start-up dedicated investment funds, are playing an important role in fostering the culture of innovation and entrepreneurship in India. The Government has also built a robust alternative investment regime and a friendly tax system for venture capitalists and angel investors, which can improve financial access for start-ups.

Regulatory formalities requiring compliance with various food laws are time consuming and difficult in nature. Often, new and small firms are unaware of nuances of the issues and can be subjected to intrusive action by regulatory agencies. In order to make compliance for start-ups friendly and flexible, simplifications are required in the regulatory regime. The ecosystem for successful start-ups typically starts with a multitude of operational, legal, regulatory and taxation compliances that an entrepreneur needs to know about. A key mandate for food start-ups is to comply with food safety regulations at every stage of the food ecosystem. A robust regulatory environment can enable a favourable macro-economic environment to nurture the growth and development of food-based start-ups. Food Safety and Standards Authority of India (FSSAI) regulates the manufacture, storage, distribution, sale and import of food items, to ensure availability of safe and wholesome food.

This manual has been developed to detail the procedures related to licencing & registration, labelling & packaging, safety, health & sanitary requirements and other statutory and regulatory compliances as per the FSA Act. It will serve as guide for fledgling start-ups in the food sector across the food value chain to enable an environment for ease of doing business.

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INTRODUCTION

The Indian food industry is poised for huge growth, increasing its contribution to world food trade every year. In India, the food sector has emerged as a high-growth and high-profit sector due to its immense potential for value addition, particularly within the food processing industry.

Accounting for about 32 per cent of the country's total food market, The Government of India has been instrumental in the growth and development of the food processing industry. The government through the Ministry of Food Processing Industries (MoFPI) is making all efforts to encourage investments in the business. It has approved proposals for joint ventures (JV), foreign collaborations, industrial licenses, and 100 per cent export oriented units. To encourage entrepreneurship in the country, the Start-up India Action Plan was launched in January, 2016 by the Government of India under the flagship Invest India initiative of Department of Industrial Policy & Promotion (DIPP). Through the initiative, the Government aims to empower start-ups through innovation and technology and to accelerate the setting up of successful enterprises in India.

The Indian food processing industry is one of the largest industries in India and is ranked fifth in terms of production, consumption, export and expected growth. It contributes around 8.80 and 8.39 per cent of Gross Value Added (GVA) in Manufacturing and Agriculture respectively, 13 per cent of India's exports and 6 per cent of total industrial investment. Food processing as a sector is uniquely positioned at the intersection of agriculture, manufacturing and services and hence, has the potential to develop into a sizeable growth engine for the Indian economy. The food processing sector and food services and retail sector offer immense opportunities for entrepreneurs to develop robust, scalable and replicable models and transform the food ecosystem of India. The online food ordering business in India is in its nascent stage, but witnessing exponential growth. With online food delivery players like FoodPanda, Zomato and Swiggy building scale through partnerships, the organised food business has a huge potential and a promising future.

As per industry estimates, there are close to 200 start-ups operating in the food processing and allied ecosystem. Various Government and private initiatives are playing a catalytic role in boosting start-ups in the food sector. These start-ups work across the food processing value chain towards creating innovative products, supply chain solutions, packaging, processing technology, equipment, storage and logistics, food safety, marketing, e-commerce based B2B/B2C models, distribution and retail.

As per the World Bank, India currently ranks at 100 out of 190 countries in the 'Ease of Doing Business Index, 2018'. This implies how easy or difficult it is for an entrepreneur to open and run a small and medium-sized enterprises (SMEs) when complying with relevant regulations. India's rank has significantly improved due to various Government reforms including but not limited to compliance regime based on self-certification, providing legal support and fast-tracking patent examination at lower costs, relaxed norms for public procurement, tax exemption on capital gains, tax exemption for three years, providing funding support, and separate institutional trading platforms. However, a lot needs to be done as start-ups continue to face numerous legal and regulatory challenges in order to grow into successful organizations.

Starting up a new enterprise in the food sector across the value chain offers several challenges and there is immense opportunity to offer new age solutions to tackling the problems through the best of innovation, technologies and business models. Like all business, food businesses of any type comes with its own set of regulations that enterprises must be aware of and comply with before incorporating the business. The Indian food industry is regulated by several laws which govern the aspects of licensing, registration, sanitation and other necessary permits that are required to start up and run a food business. In India, the Food Safety and Standards Act, 2006 overrides all food related laws. Compliance with regulations not only prevents penalties and embarrassment, but also protects the business from fraud and other illegal or unfair practices. It is the responsibility of the food business to comply with the licencing & registration, labelling & packaging, safety, health & sanitary requirements and other statutory and regulatory compliances as per the FSA Act.

CHAPTER-1

THE FOOD INDUSTRY ECOSYSTEM

(This module provides context and foundational knowledge about India's Food Industry Ecosystem with regards to the latest trends, opportunities and challenges.)

Chapter 1: The Food Industry Ecosystem

The Indian food industry, the sixth largest in the world, has seen unprecedented growth in terms of size and revenue over the past five years. Retail start-ups contribute about 70% to the total sales, while food-processing companies account for the balance 30% of the country's total food market. The Indian food sector has emerged as a high-growth and high-profit sector due to its immense potential for value addition, particularly within the food processing industry.

The entry of technology and mobile application-based services has led to a massive transformation in how the food industry, operates. A high-growth sector, the Indian food industry is poised for even greater growth with the use of technology and estimated to $894.98 billion in size by 2020, while the food service industry is expected to reach $78 billion by 2018.

With new consumer demographics comprising young, urban-dwelling working professionals driving its growth, food-based start-ups has been amongst the most promising sectors within the Indian start-up ecosystem. The overall impact of the rising competition in the food industry space will only help the industry grow in the next few years.

The Government of India 'Make in India' campaign launched in 2014 facilitates investment in manufacturing in various sectors; including, food processing. With the campaign, the government aims to reduce food losses and keep food inflation in check while generating local employment and demand for local agricultural products. Food parks are under development across the country to support domestic demand for processed foods, beverages, and ingredients for food service and retail sale.

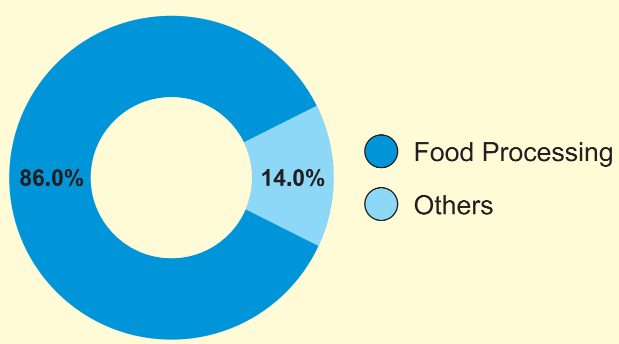
According to the DIPP, the food processing sector in India has received around USD 7.54 billion worth of Foreign Direct Investment (FDI) during the period April 2000-March 2017. The Confederation of Indian Industry (CII) estimates that the food processing sectors have the potential to attract as much as USD 33 billion of investment over the next 10 years and also to generate employment of 9 million person-days.

1.1 The Indian Food Processing Industry

The Indian food and grocery market is the world's sixth largest. The food processing industry accounts for 32 per cent of the country's total food market, one of the largest industries in India, and is ranked fifth in terms of production, consumption, export and expected growth. It contributes around 8.8 and 8.4 per cent of Gross Value Added (GVA) in manufacturing and agriculture respectively. Food processing accounts for 13 percent of India's exports and six percent of total industrial investment. Among all food categories the Ready to Cook/Ready to Eat and packaged food has grown at the fastest rate (CAGR of 18-20%). As per the 2016-2017 Annual Survey of Industries, there are 37,175 registered food processing units in the country that employ approximately 1.7 million people in food and beverage manufacturing. According to an ASSOCHAM Grant Thorton study, the Indian food processing sector has the potential to attract $33 billion in investment and generate employment for 9 million persons by 2024.

Rice mills account for the largest share of processing units in the organized sector with an expected growth of 5% in 2018-19. China is expected to import basmati and non-basmati rice from India. Overall, the Government expects the processing in this sector to grow by 25% of the total produce by 2025.

FOOD PROCESSING INDUSTRY'S CONTRIBUTION TO INDIA'S GDP THROUGH MANUFACTURING (FY16*)

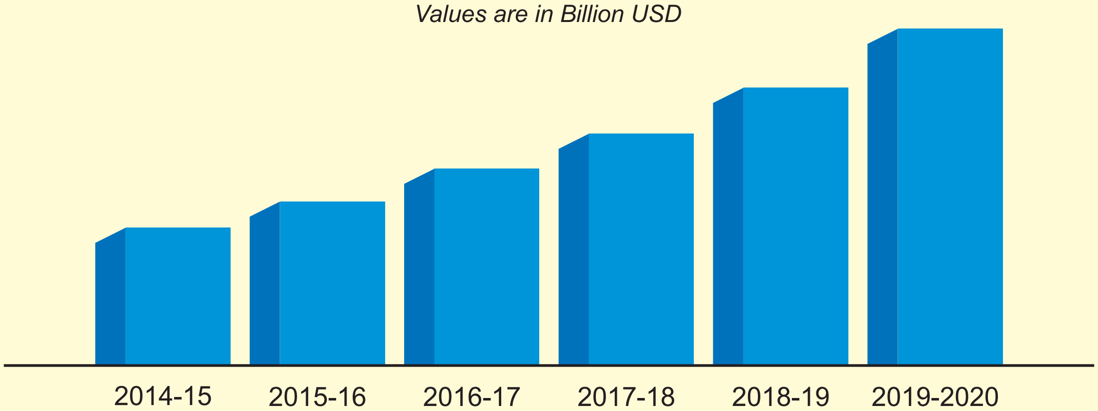


Source: Ministry of Food Processing Industries (MOFPI), TechSci Research

The changing preferences of the upward mobile middle class families from the urban areas have given prominence to food processing sector and also fuelled the growth in the last few years to make the industry the fifth largest in India in terms of production and export growth. Food processing industry has been performing better than agriculture and manufacturing. Higher growth of food processing industry over agriculture indicates that the level of processing has been increasing over the years. Earlier food processing was limited to food preservation, packaging and transportation, whereas the industry has evolved and widened its scope with emerging new trends in consumer preferences and the advancement in technologies adapted to meet those preferences. These new developments include establishment of cold storage facilities, food parks, packaging centres, irradiation centres and modernised abattoir to offer new products like ready to eat foods, beverages, processed fruits & vegetables, processed marine and meat products, etc.

FOOD PROCESSING INDUSTRY: INDIA

Values are in Billion USD



Source: Indian Food Industry, Food Processing Industry in India, Statistics - IBEF

It is imperative, while talking of the food sector, to mention the importance of Agriculture, which has been aiding the sector's growth since ages and without which there would have not been any food industry. The agriculture sector, besides raising the food basket for internal consumption, also provides the basis for foreign food trade and it earn foreign exchange for the country. It is due to the high output capacity of the nation's agriculture that today India ranks among top two countries in the world in terms of production of milk, pulses, rice, wheat, fruits, vegetables and sugarcane. Additionally, India's performance on the world stage is getting a further boost in the production of livestock, fishing & aquaculture. Agriculture's share in the GDP was 17.5 per cent in 2015-16.

India Identified following major factors hampering the growth of food processing sector and holding it back:

- Low Availability of trained manpower
- Constraints in raw materials production.
- Low Access to credit
- Inadequate infrastructural, facilities
- Lack of Applied research
- Inconsistency in central and state policies
- Taxation
- Lack of specific plan to attract private sector investment across the value chain
- Lack of market Intelligence

1.2 Farm to Fork Ecosystem – The Indian perspective

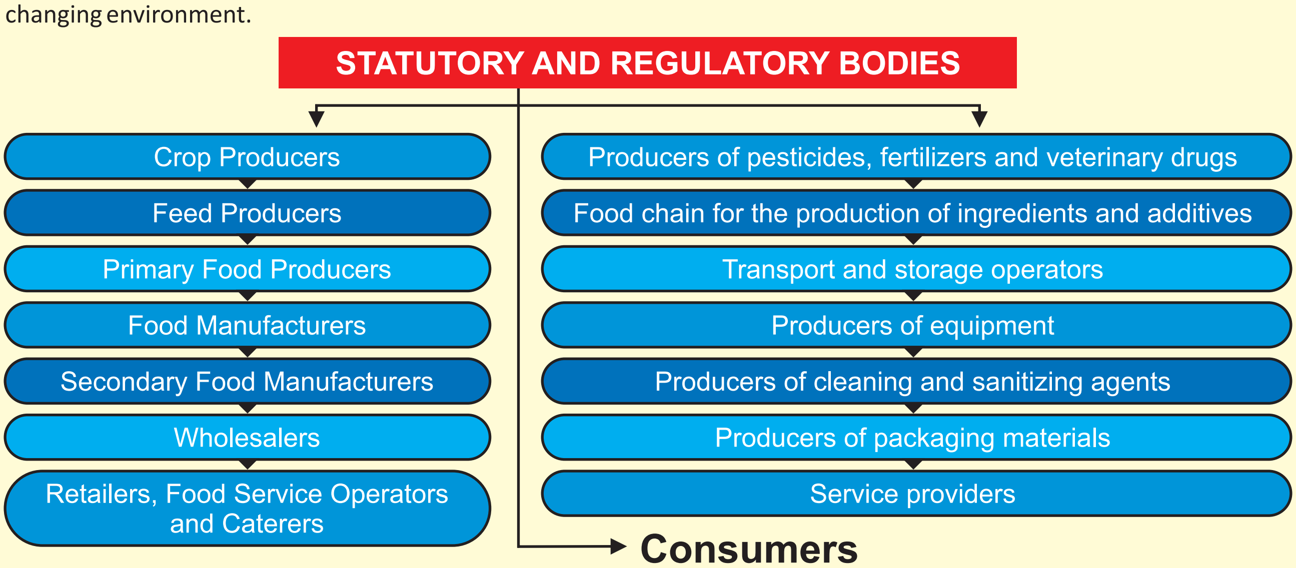
The Farm to Fork ecosystem comprises interrelated networks of business enterprises through which food products and commodities move along the value chain from production to consumption, including preproduction activities. It operates in inter-related continuously interacting network comprising business, operations, and regulatory frameworks.

The term "Farm to Fork" encompasses the entire food ecosystem comprising of products, processes, and people (stakeholders) involved in the production, distribution, and processing of food as well as value addition thereto, besides marketing, consumption, business enablers or support service providers, and regulators governing and creating policies, thereby, defining the operating framework for the ecosystem. Business enabling services such as telecommunications, financial services, energy, and logistics also play a vital role within this ecosystem. Non-business stakeholders are central to food value chain operations; these include governments, NGOs, donor agencies, and international organizations.

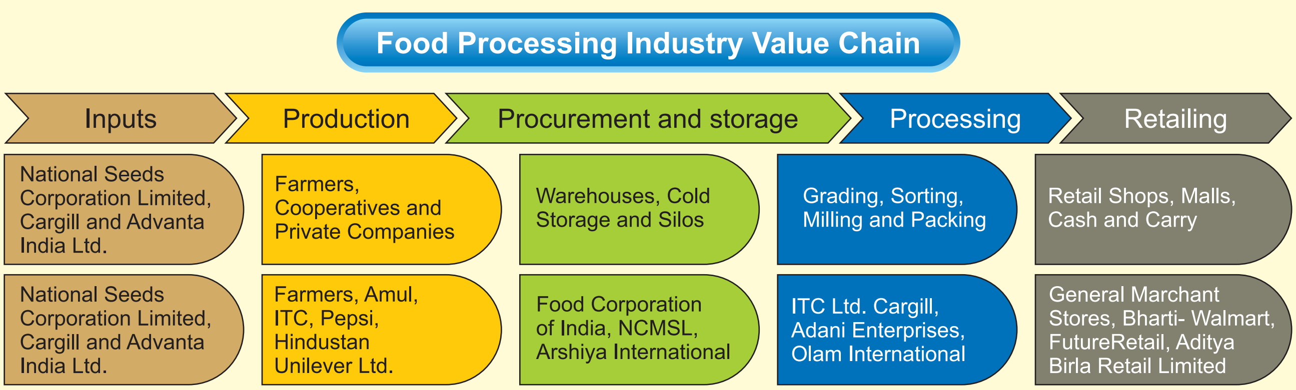
A step by step explanation:

- Farmer decides to grow a crop. Agricultural input companies supply seeds, fertilizers, pesticides, equipment, and other necessary inputs etc. Farmers uses these resources and combines it with other such as land, water, energy, capital, labour, and expertise for production.
- Once the produce is harvested, the farmer may sell the produce directly or may undertake on-farm primary value addition and then sell it either to intermediaries or directly to consumers. The product may undergo the following types of processing:
  - Primary processing: includes basic steps of processing like cleaning, grading, sorting, packing etc. to make the products fit for human consumption. Finished products in this case include packed milk, fruits & vegetables, milled rice, flour, pulses, spices and salt largely unbranded.
  - Secondary processing: basic value addition, e.g., tomato-puree, ground coffee, processing of meat products.
  - Tertiary processing: high value addition products like jams, sauces, biscuits and other bakery products ready for consumption. This is estimated to account for around 35 to 40% of the total processed food and mostly falls in the organised sector.
- The intermediaries may further sell it to traders, exporters, processors, retailers, or consumers.
- Packaging and distribution is undertaken by the relevant stakeholders.
- Across the chain, stakeholders depend on business enablers, such as storage and transport infrastructure, financial services, communication and market information services, energy and water management infrastructure, etc.
- The enabling environment created by the public sector, which includes Government-provided infrastructure and services, policy, and regulations, also influences commerce.
- The ecosystem is also influenced by the natural environment (soil fertility, water supply, and climate variations), the country's socio-political and economic context as well as global dynamics.

Stakeholders across the ecosystem are impacted by changes in the global market, volatile prices of food commodities; emergence of new markets, etc. and try to find ways to sustain themselves within this competitive, globalized and rapidly changing environment.



Farm to Fork Ecosystem



Opportunities and Challenges

India has a distinct advantage in terms of production leadership, a growing consumer base, and varied ecological zones. However, the connecting links between various stakeholders right from production to consumption need to be more adaptive and efficient. Some of the key areas in this regard include:

- **Packaging:** The average distance travelled by food has increased significantly over the past years. Good packaging is critical to maintaining the quality, shelf life of perishable products, and making handling easier. There is a need to improve the quality of packaging yet bring down the cost for large scale adoption by stakeholders. This can be achieved by introducing new technology and using manufacturing automation.
- **Standards:** Standards related to the food processing industry can be categorized as food standards and operating standards. While food standards refer to the content of the food, operating standards are related to standardized operating processes being followed in the industry. These ensure uniformity and compliance by food business across the nation.
- **Food safety:** With the increasing awareness for 'healthy food' among consumers, consumers have become keen to know more about the journey of food from farm to fork and the safety aspects therein. With increase in food exports, compliance with international safety standards has also become crucial. This is slightly challenging for India considering the fragmented nature of the industry and number of small scale farm-holders operating in the country.
- **Skilled manpower:** The food ecosystem in India is constantly evolving with the introduction of new technologies and socio-economic trends. To meet the demands of the ever- evolving food chain, there is need for skilled manpower to manage it.

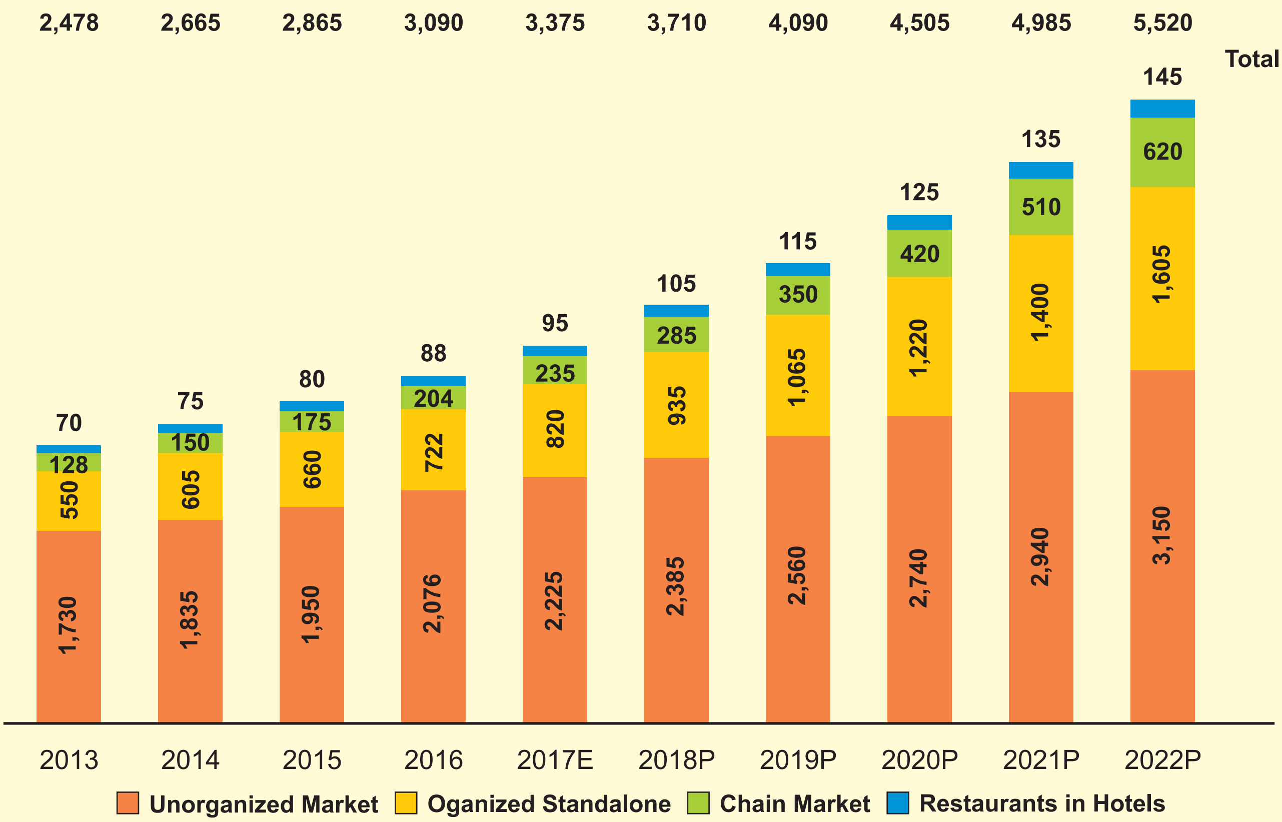
1.3 Food Start-Ups - Major Trends

The Indian food industry has evolved significantly over the last two decades; new formats have emerged, service levels have improved and supply chain practices have become more efficient. A number of global as well as domestic players have set-up their businesses in India owing to the gamut of opportunities in various areas of the food industry. The major trends that are changing the face of the Indian food processing industry are as follows:

- **Technology as an enabler:** Technology has impacted all aspects of the food industry, from booking a table, sourcing groceries, making reservations, ordering food and even delivery. Several new food tech start-ups have emerged that have helped organise the unorganised food retail industry. Online sale of food is also gaining momentum as big data analytics and cloud computing assist restaurants owners to derive value out data. Digital kiosks, tablets are increasingly being used by restaurant owners for displaying their menu and at the same time, consumers are making use of technology to compare ratings, reviews, etc.
  - **Internet of Things (IoT):** The network of devices that gather and convey data via the Internet. IoT will be a key enabler in making new business models a reality. As numerous devices and systems are harmonized to monitor supply chain activities, food industry will continue to find new and innovative offerings. It is helping food processors and suppliers to reduce maintenance costs, uncover opportunities, influence productivity, and transparency by integrating the supply chain from farm to fork.

- **Cloud computing:** Cloud Computing is both a combination of software and hardware based computing resources which offers online data storage, infrastructure and application. It is serving as the backbone to gather and analyze data through the food supply line management: from the field where the crop grows, the warehouses that store it, the containers that ship it to, the consumer that buys it.
- **Blockchain:** Blockchain technology is a way of storing and sharing information across a network of users in an open virtual space. It provides a secure way to track and transfer assets through the food supply chain.

• **Expansion in the market share of the organised food service sector:** Owing to the large customer base, many foreign investors have launched their operations in India fostering the development of organised food sector in the country. Various global and domestic players are looking to expand their operations in India by opening new outlets, engaging in partnerships, employing manpower, etc. which would accelerate the growth of organised food sector in India. The unorganized segment's share in the Food Services market reduced from 70% in 2013 to 66% in 2016 and is projected to fall to 57% in 2022. This is the case as many unorganized businesses are moving towards the organized sector. The organized market (chain and organized standalone outlets) is estimated at INR 1,15,000 crore in 2017 and is projected to grow, at a CAGR of 16%, to reach INR 2,37,000 crore by 2022 gaining a share of 40% from 31% in 2017. (source: FICCI Technopak Report)



Indian Food Services Market Size (INR '00 crore)
Source: NRAI Technopak India Food Services Report 2016, Technopak Analysis

• The use of social media to stimulate customer connect: Social media is integral to people's lifestyles today. Food service players are increasingly exploiting this platform to reach out to the customers. Since the digitally active youth, with increased disposable incomes and constitute a large part of the food market, social media is proving to be the best way to connect with them.

• The changing food plate: Changing lifestyle, increased tourism, focus on health have encouraged domestic as well as global food players to innovate food menus to outperform the competition. The technological advancements have also facilitated the changes in consumer food habits and preferences across the world. These changes brought in technologies like juice concentrates, preservatives, colorants, self-cooking meals (ready-to-eat/cook foods), reconstituted foods and fruit juices, etc. India's consumption pattern has expanded to include a range of food products such as:

- Healthy food: Low sugar and carb, high protein, multi-grain, etc.
- Natural/Organic/Fresh produce
- Cold pressed beverages

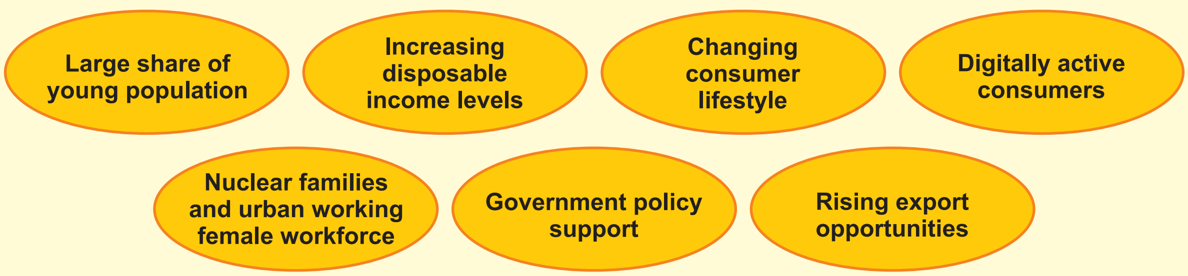
- ➢ Fusion food
- ➢ Ready-to-eat food
- ➢ Localised food

- **Packaging as a purchase influencer and communicator:** Food packaging has enabled today's consumers to look at various options and compare the value offerings thereof, before making a purchase. Packaging has also improved the 'carrying ability' and shelf life of products.
- **Organic food to be the next big wave in India's food industry:** India's progress in the organic sector has been remarkable. At present, India is emerging as a key player in the global arena, exporting over 300 products in 20 different categories to over 20 countries. Alongside the developments pertaining to the global markets, the domestic markets are growing at a rate higher than the global average and are expected to keep growing at a 25% CAGR through 2020.
- F**ood & Beverages service industry offerings:** Brands/ chains of both Indian and MNC brands have a large opportunity in this space to create bigger restaurant chains. The maximum growth being witnessed is still in the standalone restaurant space where local taste along with uniqueness of concept are the key deciding factors.

Food processing: The key drivers of growth

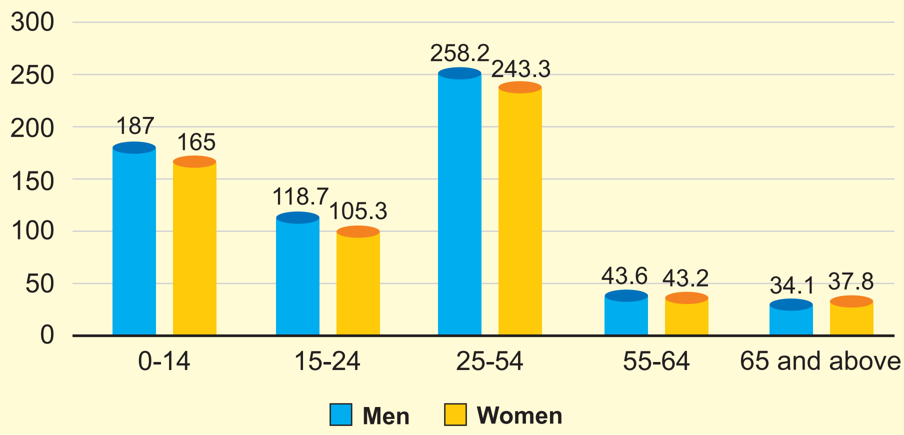
In India, the food sector has emerged as a high-growth and high-profit sector due to its immense potential for value addition, particularly within the food processing industry.

Demand side factors



- **Large share of young population:** India is one of the youngest markets with more than 45 percent of population below the age of 25 years. Eating out is often seen as a trend among youngsters who have a liberal mind set, are experimental and greater consumption.

Age wise consumption of food (in millions)



Source: Grant Thornton Analysis

- **Increasing disposable income levels:** The country's household income and consumer spending has gone up steadily offering a lucrative opportunity for food start-ups.
- **Changing consumer lifestyle:** Increasing preference to eat out, exploring culinary experiences, ready-to-eat foods, innovations in traditional menu, availability of healthier, natural options, increased use of Internet and social media. Awareness for hygiene and health have increased sale of organised section of market.
- **Nuclear families and urban working female workforce:** The female Workforce Participation Rates (WPR) has

increased giving them lesser time to meal preparation. Eating out or ready to eat meals have become a preferred alternative.

- **Digitally active customers:** Consumers have started to use the Internet for comparing restaurant ratings, reviews, menu items to make decisions regarding their eating preferences.
- **Government policy support:** Government has identified Food Processing sector as a priority sector and has introduced several fiscal and procedural incentives to promote private sector participation.
- **Rising export opportunities:** Spike in global demand as emerging markets grow at fast pace also proximity to key export destinations like Middle East and ASEAN.

Supply side factors

- **Liberal reforms:** Global food businesses has led to modernisation of the industry with global best practices and pushed the industry towards organised market.
- **Technology and emerging retail formats:** Technology evolution has brought about new retail formats. Application based online aggregators and development of third-party logistics service providers have introduced a whole new dimension to food service business in the country.
- **Increasing travel and variety of cuisines:** The country has seen an increase in the Foreign Tourist Arrivals (FTAs) obviating the growth of food service industry specially in the area of global cuisines. Local tourism has also increased giving a push to regional cuisines.
- **Procurement by direct farm-firm linkage:** Food businesses are indulging in contract farming to procure desired quality products at reasonable prices.
- **New retail formats:** Emergence of new and diverse retail formats in the F&B sector has resulted in companies finding a new format for operations in the form of food courts in large format malls. These food courts offer consumers easy access to food while shopping and entertainment activities with a choice of multiple cuisines.

1.4 Sectoral Trends in the Food Processing Industry

- **Livestock:** Livestock sector includes animal husbandry, dairy and fisheries sector are considerable major sectors. India has the largest livestock population equal to 512 million.
  - ➢ **Meat & poultry:** India is the largest producer of buffalo meat (1.4 MT in 2015) and the second largest producer of goat meat (0.91 MT in 2015). India is also the second largest egg producer (78.4 bn) and third largest producer of broiler meat (4.2 mn tonne in 2016), globally broiler meat (4.2 mn tonne in 2016), globally.
  - ➢ **Dairy:** India is the largest producer of milk in the world, with the production estimated at 146.3 mn tonne in FY15.
  - ➢ **Marine products:** Total fish production in India is estimated at 13.0 MT during 2015-16. Andhra Pradesh stood as the largest producer of fish with production of 741.3 thousand tonne during 2015-2016 (up to June 2015).
- **Fruits & vegetables:** India is the world's 2nd largest producer of fruits and vegetables. The government expects the processing in this sector to grow by 25 percent of the total produce by 2025. In 2015- 2016, the total production in horticulture sector (fruits and vegetables) is estimated at 282.5 mn tonne.
- **Food grain:** India produces more than 200 mn tonne of different food grains every year. Total food grains production reached 270.10 MT in FY16 (As per Ministry of Agriculture).
- **Health & Pharma:** India produces more than 200 mn tonne of different food grains every year. Total food grains production reached 270.10 MT in FY16 (As per Ministry of Agriculture).
- **FMCG:** Among the fastest growing segments in India; it includes packaged food, aerated soft drinks, packaged drinking water and alcoholic beverages.

1.5 Sectoral Challenges in the Food Processing Industry

Aptly recognised as the 'sunrise industry', providing vital linkages between the two pillars of our economy – manufacturing and agriculture – the Food Processing industry in India is undergoing a significant transformation. However, the industry faces certain bottlenecks to trounce for sustained growth in future. Broadly, these challenges can be categorised as follows:

- Supply side bottlenecks: Small and dispersed marketable surplus due to fragmented holdings, low farm productivity, high seasonality, perishability and intermediation result in lack of distribution on supply and quality, and in turn, impede processing and exports.
- Infrastructure bottlenecks: More than 30 per cent of the produce from farm gate is lost due to inadequate cold chain infrastructure (covering only 1 per cent of total F&Vs production) and inadequate logistics. About 80 per cent of the

217 lakh tonnes cold storage capacity is engaged by potatoes while other F&Vs account for only 0.2 per cent.

- Deficiencies in the regulatory environment: Lack of integration & clarity: Numerous laws, under the jurisdiction of different ministries and departments, govern food safety and packaging. The multiplicity of legislation leads to contradictions in specifications, conflicting approach, lack of co-ordination and administrative delays.

i) **Livestock:** Some of the major challenges faced by the livestock sector are:

Meat & poultry:

- ➢ Highly perishable processed produce
- ➢ Inadequate access to common facilities
- ➢ Limited understanding of international laws
- ➢ Licenses and clearances from different departments
- ➢ Predominantly a live bird/wet market instead of a chilled/frozen one
- ➢ Only 21% meat is processed
- ➢ Only 6% in poultry products are processed
- ➢ Expensive poultry feed

Dairy:

- ➢ Highly perishable processed produce
- ➢ Low milk productivity from cattle
- ➢ High fodder prices
- ➢ Lack of procurement of standard quality of milk
- ➢ Lack of cold chain infrastructure
- ➢ Only 35% milk is processed
- ➢ Licenses and clearances from different departments

Marine products:

- ➢ Highly perishable processed produce
- ➢ Licenses and clearances from different departments
- ➢ Only 23% of fish products are processed
- ➢ Substantial fishery resources are under-utilized

ii) **Fruits & vegetables:**

- ➢ Highly perishable produce & Low value addition
- ➢ Processing units are primarily SME & MSME
- ➢ Varying procurement price for the produce
- ➢ Only 2% is processed; 18% of vegetables are lost due to inadequate post-harvest management, transportation & storage infrastructure

iii) **Food grains:**

- ➢ Mainly primary processing is carried out
- ➢ Limited storage capacity
- ➢ Inefficient procurement and movement for PDS
- ➢ Medium value addition

iv) **Health & Pharma:**

- ➢ High time consumption in obtaining various licenses

v) **FMCG:**

- ➢ Unorganized market
- ➢ Difficulty in distribution

NOTES

CHAPTER-2

START-UP ECOSYSTEM

(This chapter provides readers with information regarding the needs of a start-up such as regulations, funding, certification, legal requirements, etc.)

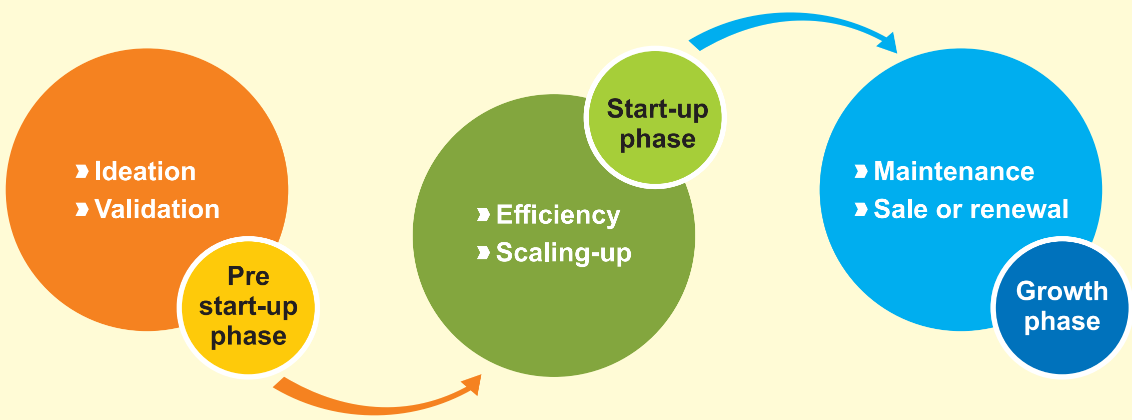
Chapter 2: START UP ECOSYSTEM

What is a Start-up?

The DIPP defines a start-up as an entity established:

- Not prior to seven years, however for start-ups in the field of biotechnology, not prior to ten years
- With annual turnover not exceeding INR 25 crore in any preceding financial years
- Working towards innovation, development or improvement of products or processes or services, or if it is a scalable business model with a high potential of employment generation or wealth creation
- Provided that such entity is not formed by splitting up, or reconstruction, of a business already in existence.
- Provided also that an entity shall cease to be a start-up if its turnover for the previous financial years has exceeded INR 25 crore or it has completed 7 years and for biotechnology start-ups 10 years from the date of incorporation/registration.
- Provided further that a start-up shall be eligible for tax benefits only after it has obtained certification from the Inter-Ministerial Board, setup for such purpose.

The life cycle of a start-up



1. Pre start-up phase includes
   - **Ideation:** Identify a potential scalable product/service idea for a big enough target market
   - **Validation:** The service/product identified is introduced in the market looking for its first customer(s) willing to pay for it
2. Start-up phase includes
   - **Efficiency:** The entrepreneur begins to define his/her business model and looks for ways to increase customer base
   - **Scaling-up:** Pushing the growth of the start-up aggressively while increasing its capacity to grow in a sustainable manner
3. Growth phase includes
   - **Maintenance:** Maximising benefits and overcoming challenges arising due to the global dimension that the business has achieved
   - **Sale or renewal:** The decision to sell the start up to a giant or acquire huge resources that the brand will need to continue growing

The existing start-ups in India can be categorised into two types:

- **Unicorn start-up:** A start-up valued at more than USD 1 billion by investors. Some examples include Flipkart, Ola, Big Basket, Paytm etc. A unicorn start-up puts emphasis on growth and to be priced by investors and does not largely focus on making money.
- **Cockroach start-up:** A start-up that will scale up slowly with sound fundamentals and strong business models. In other words, start-ups that aim at profitability and focus on making money, have a keen eye on team strength.

2.1 Start-up needs

The ecosystem for successful start-ups typically starts with proper mentorship with a mix of technological and managerial support. A start-up checklist would include:

- Identifying a possible business area
- Determining concept feasibility
- Developing a business plan
- Identifying a location
- Identifying a customer base
- Arranging infrastructure/resources
- Investigationg legal and regulatory conditions and compliance
- Arranging the finance

2.2 Regulations

For a start-up to be successful, it is very important to have a strong focus on customers and the market. However, it is equally critical to have a good understanding about the laws, rules and regulations that are applicable for the smooth running of the business. The important legal basics that start-ups and entrepreneurs in India should be aware of before embarking on a business venture are discussed below:

Formalizing business structure and founder's agreement

The first step to a start-up business is to formalise the nature and type of the business. Founders will need to incorporate the business as a specific business type – sole proprietorship, private limited, public limited, partnership, limited liability partnership etc. It is critical to have this clarity at the start for deciding on the business' overall vision and goals, both short term and long term.

Each business type comes with its own set of legal requirements and regulations which should be understood and complied with before incorporating the business. Given the dynamics of start-up ecosystem in India, it is also advisable for entrepreneurs to draft a Founders Agreement. A Founder's Agreement is essentially a document that specifies important details about the founding team and the business, such as, roles, responsibilities, executive compensation, operational details and exit clauses among others. The purpose of such an agreement is to reduce the possibility of unforeseen circumstances once the start-up is fully functional. Having a clear Founders Agreement with all basic details laid out forms a solid foundation to start and scale a business. The agreement can also act as the go to guide should any deviations arise.

2.2.1 Applying for business licenses

Licenses are integral to starting any business. Business licenses are legal documents that allow a business to operate while business registration is the official process of listing a business (along with relevant information) with the official registrar. In India, several licenses are applicable depending on the nature and size of business. The best way to begin a start-up is to become aware about the applicable licenses and obtaining them timely. The lack of relevant licenses can lead to costly lawsuits and unwanted conflicts.

The common license that is applicable to all businesses is the Shop and Establishment Act which is applicable to all premises where trade, business or profession is carried out. Other business licenses vary from industry to industry. For instance, an e-commerce company may require additional licenses like VAT registration, Service Tax Registration, Professional Tax etc. while a restaurant may require licenses like FSSAI License, Certificate of Environmental Clearance, etc. in addition to other applicable licenses.

2.2.2 Understanding taxation and accounting laws

Taxes are part and parcel of every business. There are a broad variety of taxes, such as, central tax, state tax and even local taxes that may be applicable for certain businesses. Different business and operating sectors attract different taxes and knowing this beforehand can prove to be useful. Recently, the Government of India launched the 'Start-up India' initiative to promote start-ups, and introduced many exemptions and tax holidays for start-ups and new businesses. According to this initiative, a start-up can avail income tax exemption for a period of 3 years as well as tax exemptions from capital gains and investments above Fair Market Value. As far as business accounting is concerned, it is a good practice to maintain proper books of accounts and audit them from time to time in order to ensure that relevant accounting and taxation rules are adhered to. Given the small size of business, many start-ups initially do not pay close attention to accounting requirements. However, this situation cannot be ignored for long as it can lead to serious accounting discrepancies. In case of online businesses, consider various payment solutions that ensure easy, effective and secure payment solutions.

2.2.3 Adhering to labour laws

Adhering to labour laws are integral to every organisation, small or big. When you are established as a company and have hired people to work for your organisation, you are subject to several labour laws regardless of the size of the organisation. Laws with regards to minimum wages, gratuity, PF payment, weekly holidays, maternity benefits, sexual harassment, payment of bonus among others will need to be complied with. It is best to consult a legal counsel to assess the laws applicable to your start-up and ensure that your start-up is compliant to the required labour laws.

With regards to labour laws, start-ups registered under the Start-up India initiative can complete a self-declaration (for nine labour laws) within one year from the date of incorporation in order and get an exemption from labour inspection. The nine labour laws applicable under this scheme are:

- The Industrial Disputes Act, 1947
- The Trade Unit Act, 1926
- Building and Other Constructions Workers' (Regulation of Employment and Conditions of Service) Act, 1996
- The Industrial Employment (Standing Orders) Act, 1946
- The Inter-State Migrant Workmen (Regulation of Employment and Conditions of Service) Act, 1979
- The Payment of Gratuity Act, 1972
- The Contract Labour (Regulation and Abolition) Act, 1970
- The Employees' Provident Funds and Miscellaneous Provisions Act, 1952
- The Employees' State Insurance Act, 1948.

An attractive employee policy can be the key to attract and retain good talent. Employee policies can also prove to be the starting point for boosting employee morale and increasing productivity.

2.3 Product Certification of Food

Manufacturers often sell their products with a quality mark of a product certification body. Quality marks are meant to communicate the added value of the product. The extra quality may refer to one or more aspects that a consumer may be unsure about. Such aspects can be environmental impact, product quality, safety and hygiene, production standards, the absence of additives or preservatives, etc. Overall, a quality mark gives the consumer a visual and easily identifiable quality assessment tool, originating from a reliable source. The State enforced certification marks for food products applicable in India are:

- AGMARK: The AGMARK certification is done of agricultural commodities for the benefit of consumers and producers/manufacturers by Directorate of Marketing and Inspection, an agency of the Government of India. There are some 205 different commodities including Pulses, Cereals, Essential Oils, Vegetable Oils, Fruits and Vegetables, and semi-processed products that have to have an AGMARK. The scheme is legally enforced by Agricultural Produce (Grading & Marking) Act, 1937.
- FPO: This mark is a certification mark mandatory for all the "processed fruit products" in India. This mark is applicable on food such as packaged fruit beverages, fruit-jams crushes and squashes, pickles, dehydrated fruits, products and fruits extracts, following the food safety and standard act of 2006. FPO mark proves that this product has been manufactured in a clean 'food safe' environment and is not harmful for people's health.
- ISI Mark: ISI is a certification marks scheme, operated by Bureau of Indian Standards (BIS), earlier known as Indian Standards Institute (ISI), under the provisions of BIS Act, 1986. Any product that has the ISI mark is supposed to be of minimum standard and safe for use by consumers. The ISI mark is both mandatory and voluntary. Some mandatory ISI certification products include cement, electrical appliances, LPG cylinder, Batteries, Oil pressure stove, Automobile Accessories, Medical equipment, steel products, Stainless Steel, Chemicals, Fertilizers, Infant foods and Packaged drinking water.
- India Organic certification mark: for organically farmed food products. Processed Food Products Export Development Authority (APEDA) under the National Program for Organic Production of the Government of India. Organic Foods must carry the Jaivik Bharat logo with the tagline "Jaivik Bharat" at the bottom. Additionally, it must also be certified under NPOP or PGS.
- Vegetarian and Non-vegetarian marks: As per Food Safety & Standards (Packaging & Labelling) Regulations, 2011:

- Every package of 'non-vegetarian' food shall bear a declaration to this effect made by a symbol and colour code as stipulated, to indicate that the symbol and colour product is non-vegetarian food. The symbol shall consist of a brown colour-filled circle inside a square with brown outline, having sides double the diameter of the circle.
- Where any article of food contains egg only as non-vegetarian ingredient, the manufacturer or packer or seller may give declaration to this effect in addition to the said symbol.
- Every package of vegetarian food shall bear a declaration to this effect by a symbol and colour code as stipulated for this purpose to indicate that symbol and colour code the product is vegetarian food. The symbol shall consist of a green colour-filled circle, having a diameter not less than the minimum size specified, inside the square with green outline having size double the diameter of the circle.

2.4 Government Initiatives for StartUps

ASSISTANCE SCHEME	INCENTIVE
Start Up India	StartUp India is a flagship initiative of the Government of India, which aims to build a strong eco-system for nurturing innovation and StartUps in the country that will drive sustainable economic growth and generate large scale employment opportunities. The Government through this initiative aims to empower StartUps to grow through innovation and design. The Start Up India campaign is based on the following three pillars: • Simplification and Handholding. • Funding Support and Incentives. • Industry-Academia Partnership and Incubation
Atal Innovation Mission (AIM)	Atal Innovation Mission (AIM) including Self-Employment and Talent Utilization (SETU) is Government of India's endeavour to promote a culture of innovation and entrepreneurship. Its objective is to serve as a platform for promotion of world class Innovation Hubs, Grand Challenges, Start-up businesses and other self-employment activities, particularly in technology driven areas. It has two core functions: • Entrepreneurship promotion through Self-Employment and Talent Utilization • Innovation promotion: to provide a platform where innovative ideas are generated
NewGen Innovation and Entrepreneurship Development Centre (NewGen IEDC)	The NSTEDC StartUp Program by Indian government is implemented in educational institutions. A maximum of twenty new projects are supported in a year Under the program the Government provides one-time, non-recurring financial assistance, up to a maximum of INR 25 Lakhs to the institution for the establishment cost, furnishing of cubicles for start-ups, purchase of PC with printers, library books, journals, laptop, multimedia projector, 3D printers etc.
Dairy Entrepreneurship Development Scheme promoted by National Bank for Agriculture and Rural Development (NABARD)	25% of the project cost as backend subsidy restricted to maximum 10 animals; subject to ceiling of INR 15000 per animal for establishing a dairy unit (INR 6 lakhs maximum) 25% of the project cost as backend subsidy restricted to maximum 20 calves; subject to ceiling of INR 6000.00 per animal for establishing a dairy unit (INR 5.30 lakhs maximum) Purchase of milking machine/ BMC up to 5000 litres- INR 20 lakhs maximum Purchase of dairy processing unit – INR 13.20 lakhs Cold storage facilities – INR 33 lakhs Dairy parlour- INR 1.0 lakh Veterinary Hospital – INR 2.60 lakhs for mobile and INR 2.0 lakhs for standalone vet clinic

Venture Capital Finance Assistance (VCA) Scheme promoted by Small Farmers' Agri-Business Consortium (SFAC)	The quantum of SFAC Venture Capital Assistance will depend on the project cost, location and the promoter's status. It will be in the form of interest free venture capital assistance up to INR 50 lakhs or 26% of promoters equity whichever is lower.
India Aspiration Fund	India Aspiration Fund (IAF) is a Fund of Funds, which would invest in Venture Capital Funds for meeting the equity requirements of MSMEs, especially Start-ups. SIDBI has so far contributed to the corpus of 88 venture capital funds which has catalysed investment of more than Rs.5600 Crore to more than 472 MSMEs.

Other Incentives

Some incentives to promote the start-ups environment are:

- Tax exemptions for three years and concessions on capital gains tax.
- Compliance regime based on self-certification and no regulatory inspection for three years.
- A fund of INR 100 billion to back start-ups. Initially the corpus will be INR 25 billion and a credit guarantee fund for start-ups.
- A Start-up India hub – a single point of contact for interactions with the government.
- Atal Innovation Mission (AIM) for promotion of research and development including 500 tinkering labs, 35 public-private sector incubators, 31 innovation centres at national institutes, 7 new research parks, 5 new bio-clusters.
- 90 days for a StartUp to close down its business.
- 80 % reduction in patent filing fee and fast-track mechanism for StartUp patent applications. Also, a panel of legal facilitators for StartUps to file IP (patents, designs, trademarks) with costs borne by government.
- Budget 2018- Promotion of StartUps: The Union budget unveiled by the Finance Minister Shri Arun Jaitley has initiated measures to promote StartUps with major revamps over the announcements over 2017. The benefits will be available for all StartUps incorporated up to 31st March 2021. Tax concessions are available for StartUps engaged in eligible business of innovation, development or improvement of products, processes or is a scalable business model with high potential of employment generation or wealth creation. The deduction will be available for a period of three out of the first seven years from incorporation provided the turnover doesn't exceed more than INR 25 Crores.

2.5 Food parks

The Scheme of Mega Food Park aims at providing a mechanism to link agricultural production to the market by bringing together farmers, processors and retailers so as to ensure maximizing value addition, minimizing wastage, increasing farmers' income and creating employment opportunities particularly in rural sector. The Mega Food Park Scheme is based on "Cluster" approach and envisages creation of state of art support infrastructure in a well-defined agri/horticultural zone for setting up of modern food processing units in the industrial plots provided in the park with well-established supply chain. Mega food park typically consists of supply chain infrastructure including collection centres, primary processing centres, central processing centres, cold chain and around 30-35 fully developed plots for entrepreneurs to set up food processing units.

The Mega Food Park project is implemented by a Special Purpose Vehicle (SPV) which is a Body Corporate registered under the Companies Act. State Government, State Government entities and Cooperatives are not required to form a separate SPV for implementation of Mega Food Park project. Subject to fulfilment of the conditions of the Scheme Guidelines, the funds are released to the SPVs. To view status of 42 Mega Food Parks funded under the scheme.

So far Twelve Mega Food Parks namely, Patanjali Food and Herbal Park, Haridwar; Srini Food Park, Chittoor; North East Mega Food Park, Nalbari; International Mega Food Park, Fazilka; Integrated Food Park, Tumkur; Jharkhand Mega Food Park, Ranchi; Indus Mega Food Park, Khargoan; Jangipur Bengal Mega Food Park, Murshidabad; MITS Mega Food Park Pvt. Ltd., Rayagada; Satara Mega Food Park, Satara; Himalayan Food Park Pvt. Ltd., Udham Singh Nagar; and Greentech Mega Food Park Pvt. Ltd., Ajmer are functional. Entrepreneurs looking for fully developed Industrial Plots to setup Food Processing Units and avail other related services may contact promoters of Mega Food Parks.

2.6 Accelerators and Incubators

These programmes assist hundreds of start-up businesses every year, giving a platform to make good connections with mentors, investors and other fellow start-ups. Incubators nurture the business, providing shelter tools and training and network to a business. Accelerators helps a stagnant business to run or take a giant leap. Ideally, in initial stages, there has to be an ecosystem where founder/co-founders have an environment to build the architecture of the fledgling start-up and hence the following stakeholders have key role:

- **Pre start-up phase:** Funding by Angel investors/ Seed funds to ameliorate corporate governance formalities.
- **Start-up phase:** Venture capital from larger institutional funds and is used to scale the company's business model with focus on building the sales force and establishing a global presence.
- **Growth phase:** Public markets that offer low cost funding during the exponential growth phase with and needs large liquidity e.g. IPO, private equity funds, etc.

Accelerators: These help ventures define and build their initial products, identify promising customer segments, and secure resources, including capital and employees. More specifically, accelerator programs are programs of limited-duration lasting about three months. They usually provide a small amount of seed capital, plus working space. They also offer a plethora of networking opportunities, with both peer ventures and mentors, who might be successful entrepreneurs, program graduates, venture capitalists, angel investors, or even corporate executives. A StartUp Accelerator on the other hand is a fast track program lasting 4-6 months, at the maximum and is for the StartUps looking to find a platform that enables rapid growth in terms of customer acquisition, product refinement to target a greater audience, or expansion, whether global or pan India.

Incubators: These help the start-ups to grow their business by providing services such as management training or office space. StartUp incubators begin with companies or even single entrepreneurs that may be earlier in the process and they do not operate on a set schedule. A StartUp Incubator has program longer than 4-6 months, closer to the range of 8-12 months, attempting to handhold the StartUps which are still working on the ideal product, apart from market validation at scale.

'Accelerator is a greenhouse for young plants to get the optimal conditions to grow. An Incubator matches quality seeds with the best soil for sprouting and growth.'

2.7 Types of Funders

Once a StartUp is up and running, the primary source of funding for the same comes either from own money or loans taken from their friends and family. These first tiers of investors provide the "Seed Funding". These are the only people likely to believe in newbies with minimal product evidence or business experience. Usually, these funds are only used for market research and are useful till a StartUp finds venture capital to invest in their business. Shortly after starting off and building a prototype the StartUps enter multiple stages of funding which are angel investors, seed funding, venture capitals, and private equities.

- **Boot-strapping:** The process of utilizing personal saved up funds or funding from friends and family is known as bootstrapping or self -funding.
- **Crowd-funding:** Crowdfunding platforms are basically set up for individuals to pitch their business ideas or challenges to a community of investors or people willing to support their ideas or cause. How it basically works is that an individual makes a business pitch on the crowdfunding platform and shares his business model and potential for growth. If the idea is bought by the crowd funders on the platform, they would support the individual's business model publicly and donate funds respectively.
- **Angel Investor:** An Angel investor is typically an individual who will invest in StartUps in exchange for equity. These angel investors are high networth individuals looking to invest in early-stage StartUps that have a strong base or idea in exchange for a share of the equity. Angel investors look for a working prototype, defined model, strategic business plan and assess the promoters background and dedication towards the company. Angel investors usually only fill in the gap between self-funding and raising a round of series funding.
- **Venture Capital:**
    - The next stage is 'Series A' funding is where a venture capital first gets involved. Being a venture capital firm that's dedicated to investing in profitable companies with a growing customer base, the amount of funding raised is generally a lot higher as compared to that by an angel investor. The first preferred stock is offered to external investors at this stage. The aim of raising Series A funding, apart from expanding the StartUp business is also paying the salaries of all current employees.
    - Series B funding is the next round of funding after the previous funds have been utilized in building a business plan for long-term profit and product availability. In Series B funding businesses have access to a much larger amount of funds. These fund aim to take the profits to a next level. Since the product is already out and a business plan is in place, reaching this stage of funding means the risk of investment is lesser. With series B funding, companies can expand their employee base and build a stronger team so as to expand in different markets and take the business to the next level.

- During Series C funding, investors are more interested in companies that are already successful in business. Companies go for this round of funding when they're looking to expand to other markets or preparing for acquisitions. Series C is considered as a less risky one, than the other phases or rounds. This is usually the stage after which companies have their first Initial Public Offering (IPO)
- The Series D funding is resorted to if a company decides to not go public and stay private for a longer time, they opt for series D. A company reaching this stage of funding goes for rounds of funding with smaller amounts instead of one big investment to preserve promoters' equity stakes

- Private Equity: Private Equity investments are made in companies that have not gone public yet. PE firms invest huge amount of money with the aim of acquiring a good position with controlling in the company. The mode of exit for a private equity is either a selloff to another private equity player or by offer for-sale through IPO. In India, investments by PE funds are focussed as agri-agnostic funds who deploy funds across agribusiness or remain focussed on sustainable aspects of agribusiness value chain.

This has been summarised in the Table below:

STAGE	WHOM TO APPROACH	HOW THEY WORK
Angels	Angel networks, individual angels, industry stalwarts	Financial investor + actively involved in getting first big client, helping develop team, thinking through GTM challenges. Can be active/passive depending upon relationship with StartUp
Seed	Institutional seed funds, accelerators and incubators	Seed funds – financial investors + network effect to build scale Accelerators – short programs with high engagement, boot camps, mentoring access to any business need. Might come with a financial investment too Incubators – longer programs in a cohort, provide small funding/grants, access to investors in addition to business mentoring
Pre Series A/ Series A	VC Funds	Financial investors; bring speed and scale to the game. If investor is sector focused, they can add value in business development and GTM strategy as well; heavily involved in building a team and ensuring growth
Series B/Series C	Select VC funds and PE funds	Financial investors; focus on profitable growth, creating an institution with processes and ensuring professional talent starts operating the daily grunt work

2.7.1 Various Stages of Equity Funding

STAGE	WHOM TO APPROACH	INDICATORS	INDICATIVE SIZE
Friends and family	Personal network	Purely conceptual stage of start-up; this is largely savings and money pooled in from close friends and family, who believe in your idea and ability to execute	Up to 2 crore
Angels	Angel networks, individual angels, industry stalwarts	MVP in place; some limited revenue/customer traction, lot of help needed in GTM and core team formation at this stage	25 lakh – 5 crore
Seed	Institutional seed funds, accelerators and incubators	Founding team and skeletal team in place, revenues trickling in; challenges around growth/ manufacturing capacity/ partnerships	3 crore – 20 crore

Pre Series A/ Series A	VC Funds	Business model proven with decent revenue growth demonstrated, team identified to help scale the business, growth capital needed for capex/wc/burn/customer acquisition	10 crore – 50 crore
Series B/Series C	Select VC funds and PE funds	Pure growth capital to replicate across geographies, build economies of scale; move from founder led to professional led businesses	25 crore – 150 crore

2.7.2 What do Equity Funders Look for in Start-ups

Capital is the basic ingredient for any business to thrive. Without adequate finance, business StartUps tend to crumble, and this malignant obstacle often causes infant business StartUp owners to seek financial backing for their StartUps. Obtaining the required funding for your business is entirely the choice of the start-up. However, when seeking capital from external sources, there are certain points that provide the edge for successful funding:

- **Vision and experience of the founders**
  - short term money making v/s creating long term enterprise value?
  - do they have the calibre to execute the vision?
  - are they adaptive to change/feedback?
- **Scalability potential**
  - can the start-up scale 10x-100x in the next 5 years?
- **Disruption quotient**
  - product/consumer behaviour/channel optics – what's the newness?
- **Defensibility or differentiation qualities**
  - how can the start-up compete with larger players/faster players?
- **Exits (and returns)**
  - how can the start-up give the investor an exit? how much return can an investor make?

2.7.3 What if Start-ups don't fit into Equity Funding

Equity financing is where you trade ownership of your business to angel investors or venture capitalists -- in return for their capital. Equity is especially important for certain industries and kinds of businesses, like technology start-ups and companies with global aspirations. s well suited for start-ups in high growth industries, such as the technology sector, and it requires a strong personal network, an attractive business plan, and the foundation to back it all up. However, companies that score investments will have capital on hand to scale up and will not be required to start paying it back (with interest) until the business is profitable.

Equity financing allows the business owner to distribute the financial risk among a larger group of people. When you aren't making a profit, you don't have to make repayments. And if the business fails, none of the money needs to be repaid. Ultimately, the decision between whether debt or equity financing is best depending on the type of business you have and whether the advantages outweigh the risks. Some research on what the norm is and what are competitors following would help a long way. Investigate several financial products to see what suits your needs, and if you are considering selling equity, do so in a manner that is legal and allows you to retain control over your company:

- Evaluate whether your business needs equity capital or not - unit economic profitability, customer awareness costs and working capital are often drivers for equity consumption.
- Equity is the most 'expensive' form of capital with steepest return expectations and investors protect their rights in companies in an iron-clad manner – are whether you accept the risk.
- Explore debt as an option after the friends and family round of investment, if your StartUp is not 'equity friendly'.
- Collateral free loans (CGTSME) are available to StartUps in addition to many other fiscal benefits discussed earlier:

The Ministry of Finance has come up with a scheme Credit Guarantee Fund Trust for Micro and Small Enterprises" (CGTMSE) to support innovative/tech based StartUps. Unlike any other loan scheme where banks ask for collateral, track record, revenue flow to the company, last 3 years' balance sheet etc, no such parameter applies to this scheme. Under this scheme banks analyze the promoter team, investor's profile, innovative idea and revenue visibility.

- Always maintain financial discipline within your start-up. The three golden rules are:
  - **Management of working capital:** Efficient management of working capital is a fundamental part of the overall corporate strategy. The WC policies of different companies have an impact on the profitability, liquidity and structural health of the organization. Although investing in good long-term capital projects receives more emphasis than the day-to-day work associated with managing working capital, companies that do not handle this financial aspect (working capital) well will not attract the capital necessary to fund those highly visible ventures; in other words, you must get through the short run to get to the long run. income>expenses
  - **Management of receivables and payables:** Receivables contribute to a significant portion of the current assets. For investments into receivables there are certain costs (opportunity cost and time value) that any company has to bear, along with the risk of bad debts associated to it. It is, therefore necessary to have a proper control and management of receivables which helps in taking sound investment decisions in debtors. Ensure that receivables are in excess of payables.
  - **Utilization of working capital:** Use working capital for meeting short term liabilities with the objective to ensure that operations continue and debt obligations are met with on time. Refrain from using short term capital (working capital) to create long term fixed assets.

2.8 Other Areas of Regulatory Concern

Once an entrepreneur has taken all the important decisions relating to starting a business, he/she has to take into account the basic regulatory requirements which are to be followed for setting up the organisation. Each type of entity is governed by separate laws, though there are certain common laws which are to be complied with. Other than laws relating to the incorporation, tax laws, labour legislations, environmental laws, securities laws, contract law, intellectual property laws and various other kind of laws are required to be adhered to. Start-ups should also be aware of dispute settlement mechanism which includes litigation, arbitration, mediation, conciliation and negotiation.

The Government of India has come up with a comprehensive policy on encouraging start-ups in India through various policies and regulations. An incorporated private limited company or a partnership firm registered under the Partnership Act, 1932 or a limited liability partnership under the Limited Liability Partnership Act, 2008 in India can be considered as a 'Start-up' till seven years from the date of its incorporation/ registration for getting the benefits under the Government of India schemes.

- **The Companies Act, 1956:** The most important regulation is the Companies Act,1956, which regulates all the affairs of a company. The Ministry of Corporate Affairs, earlier known as Department of Corporate Affairs under Ministry of Finance, is primarily concerned with administration of this Act as well as other allied Acts and rules & regulations framed there-under.
- **Environmental regulations:** Environmental and pollution control matters are governed by various statutes such as the Environment (Protection) Act, 1986; the Water (Prevention and Control of Pollution) Act, 1974; the Air (Prevention and Control of Pollution) Act, 1981; Hazardous Wastes (Management, Handling and Trans boundary Movement) Rules, 2008; the Manufacture, Storage and Import of Hazardous Chemicals Rules, 1989; the Indian Forest Act, 1927; the Forest (Conservation) Act, 1980; the National Environment Tribunal Act, 1995; the Public Liability Insurance Act, 1991, etc. A company is required to comply with the provisions of these environmental laws to the extent specifically applicable to the business operations of such company. Consequences of non-compliance with the relevant provisions of any such statutes and rules framed there under are provided in the respective statutes.
- **Labour and employment legislations:** Next, businesses with production lines, factories, would also have to consider and comply with a host of statutes such as the Employees' State Insurance Act, 1948; the Maternity Benefits Act, 1961; the Industrial Disputes Act, 1948; The Contract Labor (Regulation and Abolition) Act, 1970; the Trade Union Act, 1926; the Equal Remuneration Act, 1976; the Payment of Gratuity Act, 1972; the Workmen's Compensation Act, 1923' the Employees' Provident Funds and Miscellaneous Provisions Act, 1952, etc.

  The above statutes govern issues such as working time and conditions of employment of workers, minimum wages and remuneration, rights and obligations of the trade unions, insurance of the employees, maternity benefits, employment retrenchment, payment of gratuity/provident fund, payment of bonus, regulations of the contract labor and such other issues concerning the employees.
- **Tax and stamp duty:** India has a federal tax structure and taxes are levied by the Central Government, the State Governments, and the local regulatory authorities. These taxes are broadly in the nature of (i) Direct Tax (which

includes income tax, wealth tax, dividend distribution tax, minimum alternate tax (MAT), share buy-back tax), (ii) Indirect Tax (which includes VAT/CST, Service Tax, Excise Duty, Customs Duty, Entry Tax, R&D Cess), and (iii) Levies on transaction (which includes stamp duty, securities transaction tax, and commodity transaction tax).

- All the Indian companies are subjected to payment of tax and stamp duty for their business transactions undertaken during the course of any financial year and on the income generated from such operations. Non-payment (inadequate and/or untimely payment) of tax and stamp duty may attract moderate to heavy penalty, cause enforceability issue of the document and, in some cases, impounding of the documents by the authority.
- **Consumer laws:** Consumer rights are the rights given to a "consumer" to protect him/her from being cheated by salesman/manufacturer. Consumer protection laws are designed to ensure fair trade competition and the free flow of truthful information in the marketplace.

  The laws are designed to prevent businesses that engage in fraud or specified unfair practices from gaining an advantage over competitors and may provide additional protection for the weak and those unable to take care of themselves. Consumer Protection laws are a form of government regulation which aim to protect the rights of consumers.
- **Cyber and IT laws:** The Information Technology Act, 2000 provides legal recognition for transactions carried out by means of electronic data interchange and other means of electronic communication, commonly referred to as "electronic commerce", which involve the use of alternatives to paper-based methods of communication and storage of information, to facilitate electronic filing of documents with the Government agencies and further to amend the Indian Penal Code, the Indian Evidence Act, 1872, the Bankers' Books Evidence Act, 1891 and the Reserve Bank of India Act, 1934 and for matters connected therewith or incidental thereto. The laws governing the crimes of the virtual world or the cyberspace are known as Cyber laws in India. Cyber laws are also defined as that sub set of law which specifically deals with the inter-network technology i.e., cyber law deals with the crime done through computer or any other digital device. Cyber-crime has been dealt under various cyber security laws such as Indian IT law, Indian Penal Code etc. Cyber-crime has been identified as a crime which is essentially a combination of computer and crime. Thus, an offence done with the computer are cyber-crimes. IT Acts in India include data, information, computer and computer network as a part of cyber-crime.
- **Intellectual Property Laws:** Specific statues protected only specific type of intellectual output; till very recently only four forms were protected. The protection was in the form of grant of designs, patents, trademarks and copyrights. In India, copyrights were regulated under the Copyright Act, 1957; trademarks under Trade and Merchandise Marks Act 1958; patents under Patents Act, 1970; and designs under Designs Act, 1911.
- **Municipal laws:** A municipality may require you obtain a license depending on your business location and type of business activity. In addition, if you are starting a new business (including a home-based business), building a new structure, or moving into an existing one, it is important to determine if the location is zoned for the type of business you are planning to establish and to ensure that you have the appropriate permits in place. It is recommended that you contact your local municipality to discuss by-laws, zoning, permits, and other rules and regulations that could impact your business start-up activities.

2.9 Food Innovators Network

To support the realization of this massive potential through government policy and regulatory assistance, the Food Safety and Standards Authority of India (FSSAI) today launched the 'Food Innovators Network' (FINE) programme.

In conjunction with the Government's initiative on 'Start-Up India' and 'Digital India', FSSAI through FINE aims to bring together innovators and start-up entrepreneurs to provide innovative solutions and transform the country's food safety and nutrition landscape. FSSAI through the medium of FINE will engage with entrepreneurs working to address challenges in areas such as affordable and accessible food testing, ensuring availability of healthy food, educating consumers towards nutritious choices and reducing food waste. It will mentor these start-ups to effectively provide innovative new age solutions to tackle these challenges through the best of innovation, technologies and business models. Start-ups working in the said areas can apply to be a part of the FINE network by visiting the microsite created at www.fssai.gov.in/fine. As a part of FINE, to support budding entrepreneurs, the regulator is setting up a FSSAI Buddy System wherein every start-up in the network will be assigned a buddy from the regulatory body. The buddies will aid the start-ups navigate their way through the regulatory space and thus enable ease of doing business.

The FINE platform aims to solve the following four challenges for start-ups:

- Cheaper, Rapid and Anywhere Food Testing
- Ensuring Availability of Healthy Foods
- Educating India and Rethinking Food Labelling: Eat Safe, Eat Right and Be a Smart Consumer
- Save Food, Feed Hungry: Waste Food Recovery

NOTES

CHAPTER-3

REGULATORY REQUIREMENTS

(This chapter provides readers with information regarding the registration and licencing procedures for food business and discusses the regulations as per FSS Act.)

3.1 FSS Act & Regulations

Principal Food Safety and Standards Regulations

- Food Safety and Standards (Licensing and registration) Regulations, 2011.
- Food Safety and Standards (Packaging and Labeling) Regulations, 2011.
- Food Safety and Standards (Food Products Standards and Food Additives) Regulations, 2011.
- Food Safety and Standards (Prohibition and Restriction for Sale) Regulations, 2011.
- Food Safety and Standards (Contaminants, Toxins and Residues) Regulations, 2011.
- Food Safety and Standards (Laboratory and Sampling analysis) Regulations, 2011.
- Food Safety and Standards (Health Supplements, Nutraceuticals, Food for Special Dietary Use, Food for Special Medical Purpose, Functional Food and Novel Food) Regulations, 2016
- Food Safety and Standards (Food Recall Procedure) Regulations, 2017
- Food Safety and Standards (Import) Regulations, 2017
- Food Safety and Standards (Approval for Non-Specified Food and Food Ingredients) Regulations, 2017.

FSS Act & Regulations

- ➢ Food Safety & Standards Act, 2006 consolidate multiple laws and establish Food Safety & Standards Authority. The act regulates the manufacture, storage, distribution, sale and import of food products so as to ensure availability of safe and wholesome food for human consumption.
- ➢ It is the responsibility and liability of Food Business Operators to ensure that the article food shall satisfy the requirement of Act and the rules and regulations made thereunder.
- ➢ The Food Authority and the State Food Safety Authorities shall be responsible for the enforcement of this Act. They shall monitor and verify that the relevant requirements of law are fulfilled by food business operators at all stages of food business.

3.2 Licensing & Registration

Section 92 (1) provides Food Authority to make regulations.

Salient Features of Food Safety & Standards (Licensing and registration) Regulations, 2011

As per the Food Act, 2006, "No person shall commence or carry on any food business except under a license."

Every person engaged in food business must apply for either of the license (state or central) or Registration based on the kind of business, annual turnover and scale of production. The eligibility criteria specified for this are as follows:

All petty food manufacturer or small scale, cottage and tiny businesses are required to get registered with FSSAI. The eligibility criteria are as follow:

- ➢ Food businesses with an annual turnover not exceeding Rs 12 lakhs or;
- ➢ Production capacity of food (other than milk and milk products and meat and meat products) does not exceed 100 kg/ltr per day or;
- ➢ Procurement or handling and collection of milk is up to 500 litres of milk per day or;
- ➢ Slaughtering capacity is 2 large animals or 10 small animals or 50 poultry birds per day or less.

Requirements of registration for Petty Food Businesses:

- Submitting an application for registration in **Form A under schedule 2** of these regulations along with fee as provided in **Schedule 3**
- Following the basic hygiene and safety requirements provided in **Part I of Schedule 4** of these Regulations and provide a self-attested declaration of adherence to these requirements with the application in a given format **under Schedule 2**
- Registration is granted after being satisfied with the safety, hygiene and sanitary conditions of the premises as contained in **Part I of Schedule 4 within a period of 30 days**.
- The Registering Authority shall issue a registration certificate and a photo identity card, to be displayed at a prominent place at all times

- Registering authority shall carry out food safety inspection of the registered establishments at least once in a year.

Requirements of registration for other businesses:

The Food Business Operator shall ensure that all conditions of license as provided in **Form B in Schedule 2** and safety, sanitary and hygienic requirements provided in the **Schedule 4** contained under different Parts depending on nature of business are complied with at all times.

Procedure for Online FSSAI Registration:

1 Complete a Simple form	2 Send your documents	3 Document submission	4 FSSAI License issued
FSSAI application forms need to be filled and deatails need to be provided about your food business.	The required documents need to sent via email and FSSAI form A and B would be created	FSSAI License application along with other declaration are filed to the local FBO	The license would be sent via email and it would act as a valid food license online after regular follows ups with food department.
Start	2 working dayes	10 working dayes	2 working dayes

Licensing

Businesses engaged in food activities are required to apply for food license of different types based on turnover, scale of business and the type of activity. Such businesses must apply for either of the licenses (central or state) or simple registration. The criteria specified in rules are as follows:

FSSAI BASIC REGISTRATION	FSSAI State License	FSSAI BASIC REGISTRATION
This is required for small business or all business startups which have annual turnover below Rs.12 lakhs. Basic registration can be upgraded to state license as your sales graph incrfease	This license is applicable to mid-sized companies which have annual turnover between Rs. 12-20 crores.	This license is applicable is typically for large business with annual turnover above Rs.20 crores. It is also required in cases where you need to supply at the goverment offices.

State License:

The criteria to apply for state license are as follows:

- Annual turnover between 12 lakhs and 20 crores or;
- Production capacity of food (other than milk & milk product and meat 7 meat products) does not exceeding 500 kg/litres per day or;
- Procurement, handling and collection of milk is up to 5000 litres of milk per day or;
- Slaughtering capacity is between 2 to 50 large animals or 10 to 150 small animals or 50 to 1000 poultry birds per day.

Central License:

Every person shall gain a Central License if his business falls under following criteria:

- Turn over above rupees 20 crores or;
- Dairy units including milk chilling units equipped to handle or process more than 50,000 litres of liquid milk/day or 2500 MT of milk solid per annum or;
- Vegetable oil processing units and units producing vegetable oil by the process of solvent extraction and refineries including oil expeller unit having installed capacity more than 2 Mt per day or;
- All slaughter houses equipped to slaughter more than 50 large animals or 150 or more small animals including sheep

and goats or 1000 or more poultry birds per day or;

- Meat processing units equipped to handle or process more than 500 kg of meat per day or 150 MT per annum or;
- All food processing units other than mentioned under (I) to (IV) including relabellers and repackers having installed capacity more than 2 MT/day except grains, cereals and pulses milling units or;
- 100 % Export Oriented Units or;
- All Importers importing food items including food ingredients and additives for commercial use.
- All Proprietary food products and novel food or ingredients or;
- Food Business Operator operating in two or more states or;
- Food catering services in establishments and units under Central Government Agencies like Railways, Air and airport, Seaport, Defence etc.

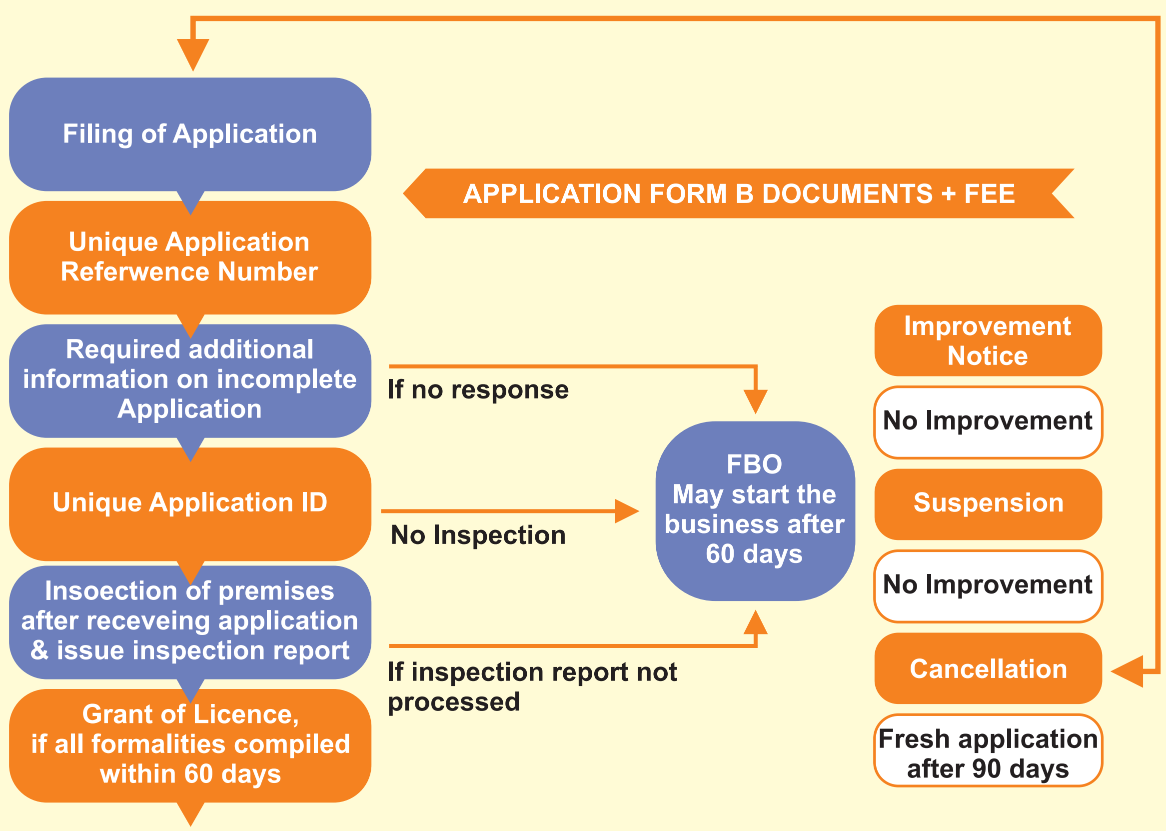
Procedure for Registration and License

Every Food Business Operator may apply for registration or License through Food License & Registration System (FLRS), an online application launched by FSSAI to facilitate FBOs in India to apply for License/Registration certificate.

https://foodlicensing.fssai.gov.in/index.aspx

Registration Procedure:

- Every petty Food Business Operator shall register themselves with the Registering Authority by submitting an application in Form A.
- The Registering Authority shall consider the application and may either grant registration or reject it with reasons to be recorded in writing or issue notice for inspection, within 7 days of receipt of the application.
- If registration is not granted, or denied, or inspection not ordered within 7 days or no decision is communicated to applicant within 30 days, the petty food manufacturer may start its business, provided that it will be incumbent on the Food Business Operator to comply with any improvement suggested by the Registering Authority even later.



Licensing Procedure:

- An application for the grant of a license shall be made in Form B accompanied by the self-attested declaration in given format and the copies of the documents required as per the kind of business.

- If, upon scrutiny of the application within 15 days from the date of receipt of the application, the concerned Licensing Authority requires any additional information with respect to an application or if the application is incomplete, the Licensing Authority shall inform the applicant to furnish such additional information or complete the application, as the case may be, within 30 days. In case the applicant fails to furnish the required information within the stipulated time of 30 days, the application for license shall stand rejected.
- On the receipt of a complete application including the additional information if asked for, the Licensing Authority shall issue an Application ID number to each applicant that will be referred to in all future correspondence between the Licensing Authority.
- A license shall, subject to the provisions of these Regulations, be issued by the concerned Licensing Authority within a period of 60 days from the date of issue of an application ID.
- After the issue of Application ID number, the Licensing Authority may direct inspection of the premises
- Such Inspecting Officer may issue a notice to the applicant, if it deems fit, guiding food business operator on necessary steps to be taken or changes or alteration to be made in the premises. The applicant shall carry out the required steps, changes or alterations and intimate the Licensing Authority within 30 days or such period as may be allowed by the Licensing Authority.
- Within a period of 30 days from receipt of an inspection report excluding the time taken by the applicant in complying with the advice, if any, given in the inspection report and verification thereof, the concerned Licensing Authority shall consider the application and may either grant license or reject the application.

Commencement of Business:

An applicant may commence his food business and the concerned licensing Authority shall not deny the applicant to commence such business if, from the date of making the completed application, a license is not issued within 60 days or the applicant has not received any intimation of inadequacy or inspection report indicating defects from the concerned Licensing Authority.

Validity and Renewal of Registration and License:

- A Registration or license shall be valid for a period of 1 to 5 years as chosen by the Food Business Operator, from the date of issue of registration or license subject to remittance of fee applicable for the period and compliance with all conditions of license
- Any application for the renewal of a registration or license granted under these Regulations shall be made in Form A or B of Schedule 2, as the case may be, not later than 30 days prior to the expiry date indicated in the license.
- Any renewal application filed beyond the period mentioned above but before the expiry date, shall be accompanied by a late fee of Rs 100 per day for each day of delay.
- Any Registration or license for which renewal has not been applied for within the period mentioned above shall expire and the Food Business Operator shall stop all business activity at the premises. The Food Business Operator will have to apply for fresh Registration or license as the case may be, if it wants to restart the business.

Fee for the Grant/Renewal of License/Registration:

Fees for Registration	Rs 100
Fees for License issued by Central Licensing Authority	Rs 7500
Fees for License issued by State Licensing Authority: (1) Manufacturer/Miller	
a)Above 1MT per day Production or 10,001 to 50,000 LPD of milk or 501 to 2500 MT of milk solids per annum.	Rs 5000
b)Below 1 MT of Production or 501 to 10,000 LPD of milk or 2.5 MT to 500 MT of milk solids per annum	Rs 3000
(2) Hotels -3 Star and above	Rs 5000
(3) All Food Service providers including restaurants/boarding houses, clubs etc. serving food, Canteens (Schools, Colleges, Office, Institutions), Caterers, Banquet halls with food catering	Rs 2000
(4) Any other Food Business Operator	Rs 2000

Form A, Form B, Application, Documents required, etc. are available at https://foodlicensing.fssai.gov.in/index.aspx

3.3 Packaging and Labelling

Salient features of Food Safety and Standards (Packaging and Labelling) Regulations, 2011

- Food Safety and Standards (Packaging and labelling) Regulations, 2011 come into force on or after 5th August, 2011.
- It provides general requirements and product specific requirement for packaging and Labelling of food products.
- Every packaged food shall carry the following information:
  - Name of Food
  - List of Ingredients
  - Nutritional Information
  - Declaration regarding Veg/Non Veg.
  - Declaration regarding food additives.
  - Name and complete address of the manufacturer.
  - Net content
  - Lot/Batch/Code identification
  - Date of Manufacturer/Packing
  - Best Before/Use by date
  - Country of Origin
  - Instruction for use
- It also provides Manner of declaration and Specific Requirements/ Restrictions on manner of labelling.3.4 Advertisement & Claims

3.4 Advertisement and Claims

- No advertisement shall be made of any food which is misleading or deceiving or contravenes the provisions of this Act, the rules and regulations made thereunder.
- No person shall engage himself in any unfair trade practice for purpose of promoting the sale, supply, use and consumption of articles of food or adopt any unfair or deceptive practice including the practice of making any statement, whether orally or in writing or by visible representation which –
  - Falsely represents that the foods are of a particular standard, quality, quantity or grade-composition;
  - Makes a false or misleading representation concerning the need for, or the usefulness;
  - Gives to the public any guarantee of the efficacy that is not based on an adequate or scientific justification thereof: Provided that where a defence is raised to the effect that such guarantee is based on adequate or scientific justification, the burden of proof of such defence shall lie on the person raising such defence.

3.5 Import Provision

Salient features of Food Safety & Standards (Import) Regulations, 2016

- No person shall import any article of food without an import license from the Central Licensing Authority.
- These regulations prescribe the procedure for clearance of food products imported in India by the food Authority.
- Food Import Clearance System (FICS) is the online portal for filing applications for clearance of food consignments.

  https://fics.fssai.gov.in/AOLogin.aspx
- The regulation provide exemption from the clearance procedure for the food consignment meant for special purpose such as consignment meant for Research & Development Purpose, food consignment exclusively meant for consumption by the sportspersons of such exporting Country, for Display Purpose in Trade Fair/Exhibition, for personal use, and imported food consignment meant for hundred percent Export/ Re- export, condition to providing self-declaration by the importer for the end use of the food article.
- It lay down the procedure for sampling of imported food consignment by the Authorized office and analysis of the samples of by analytical laboratory.
- It allows Food Importer, aggrieved by decision/order of the Authorized Officer to file a review application to the review officer.

3.6 Schedule IV

FOOD SAFETY AND HYGIENE REQUIREMENTS

To provide assurance of food safety, Food businesses must implement an effective Food Safety Management System (FSMS) based on Hazard Analysis and Critical Control Point (HACCP) and suitable pre- requisite programmes by actively controlling hazards throughout the food chain starting from food production till final consumption.

As per the condition of license under FSS (Licensing & Registration of Food Businesses) Regulations 2011, every food business operator (FBO) applying for licensing must have a documented FSMS plan and comply with schedule 4 of this regulation. Schedule 4 introduces the concept of FSMS based on implementation of Good Manufacturing Practices (GMP) and Good Hygiene Practices (GHP) by food businesses and is divided into five parts as under:

SCHEDULE IV	GENERAL REQUIREMENTS
Part 1	General hygienic and sanitary practices to be followed by food business operators applying for registration - Petty food operators and Street food vendors
Part 2	General hygienic and sanitary practices to be followed by food business operators applying for license- Manufacturing/ processing/ packaging/storage/distribution
Part 3	General hygienic and sanitary practices to be followed by food business operators applying for license- Milk and milk products
Part 4	General hygienic and sanitary practices to be followed by food business operators applying for license- Slaughter house and meat processing
Part 5	General hygienic and sanitary practices to be followed by food business operators applying for license- Catering

Schedule 4 of FSS (Licensing & Registration of Food Businesses) Regulations 2011 can be accessed at https://www.fssai.gov.in/

3.7 Overview of Standards

Salient features of Food Safety and Standards (Prohibition and Restriction for Sale) Regulations, 2011

This regulation comprises the provisions that prohibits/restricts the Food Business Operators in engaging himself in any unfair trade practice for purpose of promoting the sale, supply, use and consumption of articles of food or adopt any unfair or deceptive practice.

- It prohibits the sale of certain admixtures like water in milk; ghee in Vanaspati etc. which may falsely represent the standard or quality food.
- It mentions the restriction on the use of certain ingredient such as Kesari gram (Lathyrus sativus) and its products; Kesari dal (Lathyrus sativus) and its products; Kesari dal flour (Lathyrus sativus) and its products etc. which can have harmful effects on consumer health.
- It prohibits and restricts the sale of certain products which include food articles coated with mineral oil, tea products without registration with tea board, common salt without iodization, food articles with tobacco or nicotine as ingredients, fruits ripened using carbide gas and many others.
- AGMARK

This regulation protects the consumers from any malpractise that FBO may adopt for his economic gains. For more details regarding this regulations, FBO can check the FSSAI website https://www.fssai.gov.in/home/fss-legislation/fss-regulations.html

Salient features of Food Safety and Standards (Contaminants, Toxins and Residues) Regulations, 2011

This regulation provides standards of various contaminants including maximum levels (MLs)/ maximum residue levels (MRLs) of various chemicals/toxins which are as follows:

- Maximum limit of metal contaminants, crop contaminants and naturally occurring toxins (NOTS)
- Maximum Limits of histamine and bio-toxins in fish and fishery products
- tolerance limits of insecticides and antibiotics in food
- list of prohibited antibiotics and other pharmacologically active substances in different food articles

Salient features of Food Safety and Standards (Laboratory and Sampling analysis) Regulations, 2011

This regulation provides details on notified laboratories, laboratories for imports; referral laboratories, their functions, area of jurisdiction and quality of sample for analysis and procedure for analysis.

- As per this regulation, there are total 19 referral laboratories notified by FSSAI to carry out the functions entrusted to them the Food Safety and Standards Act, 2006.
- FSSAI has also notified 172 NABL accredited laboratories for the purposes of carrying out analysis of samples by the Food Analysts.
- The regulation also includes form for 'Certificate of Analysis by the Referral Food' and format for 'Report of the Food Analyst'.

Salient features of Food Safety and Standards (Food Products Standards and Food Additives) Regulations, 2011

This regulation contains vertical standards for various types of foods. If we take an example of coconut oil, then it is this regulation which includes all the values of different parameter of oil like saponification value, refractive index, iodine value etc. It contains provisions for use of additives in various foods in Appendix–A and microbiological requirements in respect of several categories of foods in Appendix-B.

It also includes proprietary food. Proprietary food are the foods which cover food and food ingredients which are not standardised but they are prepared from ingredients that are standardised.

Salient features of Food Safety and Standards (Approval for Non-specified food and food ingredients) Regulations, 2017

This regulation gives the opportunity to Food Business operators to innovate. It covers all those food products enlisted below. It lays down the procedure for approvals of these products.

These regulations cover:

- Novel food or food ingredients or food processed with the use of novel technology
- Food or food ingredients with a history of human consumption (at least 15 years) and not mentioned in any regulation
- New additives
- Processing aids and enzymes
- Articles of food and food ingredients consisting of or isolated from microorganisms, fungi or algae.

3.8 Regulation on Nutraceuticals, Organic Products

Salient features of Food Safety and Standards (Health Supplements, Nutraceuticals, Food for Special Dietary Use, Food for Special Medical Purpose, Functional Food and Novel Food) Regulations, 2016

This regulation prescribes standards for eight categories- Health Supplements, Nutraceuticals, Food for Special Dietary Use, Food for Special Medical Purpose, speciality food containing plant or botanicals, food containing probiotics, food containing prebiotics and novel food products.

These standards include the essential composition, requirements related to claims, labelling, permitted use of additives and the permissible limits of contaminants, toxins and residues. The regulations do not allow the use of hormones or steroids or psychotrophic ingredients in any article of food. Furthermore, these regulations provide various schedules dealing with the use of vitamins and minerals, amino acids, ingredients of plants or botanical origin, nutraceuticals, probiotics and prebiotics in these products.

FBO should refer to the link for detailed regulations:- https://fssai.gov.in/home/fss-legislation/fss-regulations.html

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CHAPTER-4

GLOBAL STANDARDS

(This chapter briefly discusses the globally accepted standards for food safety and hygiene.)

Chapter 4: Global Standards

Third-party verification and certification for food safety standards is a wide and growing trend in the food industry. This means that for businesses to remain competitive they must increasingly adopt certified standard and be subjected to food safety audits on a regular basis to maintain this certification.

4.1 CODEX: The Latin term "Codex Alimentarius" means "Food Code". The Codex Alimentarius is a collection of internationally adopted food standards and related texts presented in a uniform manner and developed by Codex Alimentarius Commission (CAC). The main function of CAC is to adopt standards by following a transparent, inclusive and consensus based process embedded in science.

- CAC is an inter-governmental food standards body of FAO and WHO established in 1963
- It develops international food standards, guidelines and codes of practice which contribute to the hygienic and nutritional quality of food, including microbiological norms, food additives, pesticide and veterinary drug residues, contaminants, labelling and presentation, and methods of sampling and risk analysis in international food trade
- Codex standards are recognized as reference standards in WTO-SPS Agreement
- Within India, FSSAI has been designated as the National Codex Contact Point (NCCP).
- Codex standards are voluntary and implementable globally.

4.2 CAC Adopts

Food standards:

In addition to standards for specific foods, the Codex Alimentarius contains general standards covering matters such as:

- Food labelling (general standard, guidelines on nutrition labelling, guidelines on labelling claims)
- Food additives (general standard including authorized uses, specifications for food grade chemicals)
- Contaminants in foods (general standard, tolerances for specific contaminants including radionuclides, aflatoxins and other mycotoxins)
- Pesticide and veterinary chemical residues in foods (maximum residue limits)
- Risk assessment procedures for determining the safety of foods derived from biotechnology (DNA-modified plants, DNA-modified micro-organisms, allergens)
- Food hygiene (general principles, codes of hygienic practice in specific industries or food handling establishments, guidelines for the use of the Hazard Analysis and Critical Control Point or "HACCP" system)
- Methods of analysis and sampling

These standards can be accessed at http://www.codexalimentarius.org/standards/list-of-standards

Code of practices:

A Code of Practice is a set of written rules which explains how people working in a particular profession should behave. Codex codes of practice include codes of hygienic practice – define the production, processing, manufacturing, transport and storage practices for individual foods or groups of foods that are considered essential to ensure the safety and suitability of food for consumption.

The details can be found as http://www.codexalimentarius.org/standards/list-of-standards/en/?provide=standards &orderField=fullReference&sort=asc&num1=CAC/RCP

Guidelines: As per the Codex Alimentarius, the Codex guidelines fall into two categories:

- principles that set out policy in certain key areas; and
- guidelines for the interpretation of these principles or for the interpretation of provisions of the Codex general standards.

Free-standing Codex principles set out the principles for key policy areas. These cover:

- addition of essential nutrients to foods;
- food import and export inspection and certification;
- establishment and application of microbiological criteria for foods;
- conduct of microbiological risk assessment; and
- risk analysis of foods derived from modern biotechnology

The Codex guidelines can be found at: http://www.codexalimentarius.org/standards/list-of-standards/en/?provide=standards&orderField=fullReference&sort=asc&num1=CAC/GL

Other Recommendations such as MLs, MRLs and other texts

The traces pesticides leave in treated products or those left by veterinary drugs in animals are called "residues".

- **Pesticide residues:** A maximum residue limit (MRL) is the highest level of a pesticide residue that is legally tolerated in or on food or feed when pesticides are applied correctly in accordance with Good Agricultural Practice.
- **Veterinary drug residues:** The maximum residue limit (MRL) is the maximum concentration of residue legally tolerated in a food product obtained from an animal that has received a veterinary medicine.

The amounts of residues found in food must be safe for consumers and must be as low as possible. Codex sets MRLs for all food and animal feed. The MRLs for all crops and all pesticides are publicly available on the Codex website, http://www.codexalimentarius.org/standards/list-of-standards/en/?provide=standards&orderField=fullReference&sort=asc&num1=CAC/MRL

4.3 ISO 22000 & GFSI

ISO 22000: The International Organization for Standardization (ISO) developed the Food Safety Management System Certification: ISO 22000. ISO and its member countries used the Quality Management System approach, and tailored it to apply to Food Safety, incorporating the widely used and proven HACCP principles and Good Manufacturing Principles. The standard has requirements for Food Safety Management Systems processes and procedures, and requires that the organization implement prerequisite programs and HACCP.

GFSI: The Global Food Safety Initiative (GFSI) is coordinated by The Food Business Forum CIES. This forum is a global food network made up of approximately 400 retailers and manufacturers worldwide. Many large food processors, manufacturers and retailers are asking their suppliers to obtain a GFSI Recognized Certification. While GFSI does not certify and does not have a certification scheme itself, it does evaluate (benchmark) other food safety certification schemes to determine which ones meet their criteria and will be recognized by the organization.

Basic difference between ISO 22000 and GFSI

ASSISTANCE SCHEME	INCENTIVE
• The **International Organization for Standardization (ISO)** is an international **standard setting** body composed of representatives from various national standards organizations. • The **ISO 22000** family of International Standards addresses food safety management. It has recently been revised from 2005 to 2018 version; making it as ISO 22000:2018. It is based on HLS (High Level Structure) system. • **Purpose of ISO 22000: 2018** ISO 22000:2018 sets out the requirements for a food safety management system and can be certified to. It maps out what an organization needs to do to demonstrate its ability to control food safety hazards in order to ensure that food is safe. It can be used by any organization regardless of its size or position in the food chain.	• The **Global Food Safety Initiative (GFSI)** follows collaborative approach to bring together international food safety experts from the entire supply chain of food. • GFSI is not a Certification Programme in itself, neither does it carry out any accreditation or certification activities. • Certification to a GFSI- recognized certification programme is achieved through a successful third-party audit against any of the certification programmes that have been recognized by the GFSI. Following are the **Certification Programme Owners (CPOs)** recognized by the GFSI: BRC GLOBAL STANDARDS · IFS Food · SQF · GRMS · CANADAGAP · GLOBALG.A.P · Global Aquaculture Alliance · primusGFS · FSSC 22000

ABBREVIATIONS

AGMARK	Agricultural Marketing
APEDA	Agricultural and Processed Food Products Export Development Authority
ASEAN	Association of Southeast Asian Nations
CAGR	Compound Annual Growth Rate
DIPP	Department of Industrial Policy & Promotion
FAO	Food and Agriculture Organization
FBO	Food Business Operator
FINE	Food Innovators Network
FLRS	Food Licensing and Registration System
FSS	Food Safety & Standards Act
FSSAI	Food Safety & Standards Authority of India
GDP	Gross Domestic Product
GVA	Gross Value Added
IBEF	India Brand Equity Foundation
INR	Indian Rupees
IoT	Internet of Things
IPO	Initial Public Offering
ISI	Indian Standard Institute
ISO	International Organization for Standardization
MOFPI	Ministry of Food Processing Industries
MSME	Ministry of Micro, Small & Medium Enterprises
MT	Metric ton
NGO	Non-Government Organisation
NPOP	National Programme for Organic Production
PDS	Public Distribution System
PGS	Participatory Guarantee Systems
SME	Small and Medium-Sized Enterprises
USD	United States Dollar
VAT	Value Added Tax
WHO	World Health Organisation

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NOTES

सत्यमेव जयते

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