



**BVFP 365S**

**Preparation of Food Processing Plant Proposal (Skill based)**

*report on,*

**Chocolate Processing Unit**

*Submitted by,*

**Mahale Rajeshwari Bhausahab**

**ROLL NUMBER. 08**

*Submitted to,*

**M.V.P. Samaj's**

**Arts, Science & Commerce College, Uttam Nagar CIDCO, Nashik 08**

**(Affiliated to SAVITRIBAI PHULE PUNE UNIVERSITY, PUNE)**

*Under the guidance of*

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**Academic Year**

**2020- 21**



**M.V.P. Samaj's**

**Arts, Science & Commerce College, Uttam Nagar CIDCO, Nashik 08**

**(Affiliated to SAVITRIBAI PHULE PUNE UNIVERSITY, PUNE)**

## **CERTIFICATE**

This is to certify that,

**MS. Mahale Rajeshwari Bhausaheb Roll no 8** of VI semester, of B. Voc. (Food Processing Technology) has completed the necessary work for the requirement of Course No. **BVFP 365S** Course Title: **Preparation of Food Processing Plant Proposal (Skill based)** in the year 2020-21. he has undergone fair exposure to start new industry on food processing and agro based includes present market position and expected future demand, market size, statistics, trends, SWOT analysis and forecast.

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Place: Nashik

## DECLARATION

I am hereby declare that this report is record authentic work carried out by us during the VI<sup>th</sup> semester and has not been submitted to any other university or institute.

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# **1. INTRODUCTION AND CURRENT STATUS**

## **1.1 Introduction**

- Chocolate is a typically sweet, usually brown, food preparation of cocoa beans, roasted and ground, often flavored, as with vanilla. It is made in the form of a liquid, paste or in a block or used as a flavoring ingredient in other sweet foods. Chocolate has become one of the most popular food types and flavors in the world, and a vast number of foodstuffs involving chocolate have been created.
- Chocolates, one of the mouthwatering foods, are relished by kids, young and middle-aged people in India. That's why chocolate industry is growing day-by-day in India. Nowadays chocolates honor that most auspicious festivals in India like Diwali and Raksha Bandhan and occasions such as birthdays, weddings and engagements. Chocolates enter the market with different sizes, shapes, and designs according to the occasion and are priced correspondingly. People are now slowly shifting from traditional Indian sweetmeats to the well-wrapped chocolates.
- Chocolate is a key ingredient in many foods such as milk shakes, candy bars, cookies and cereals. It is ranked as one of the most favorite flavor in North America and Europe.
- Despite its popularity, most people do not know the unique origins of this popular treat. Chocolate is a product that requires complex producers to produce. The process involves harvesting coca, refining coca to cocoa beans, and shipping the cocoa beans to the manufacturing factory for cleaning, roasting and grinding. These cocoa beans will then be imported or exported to other countries and be transformed into different type of chocolate products.
- Candy, also known as sweets, toffies or lollies, is a sweet treat or a confection made with sugar or sugar substitutes like chocolates, combined with additives like fruits, nuts, etc. or a piece of such confections. Unlike a cake or a chocolate bar or a loaf of bread that can be shared among many people candy is usually made in smaller pieces. The definition of candy also depend upon people on how they treat the food. Unlike sweet pastries that are served as a dessert course at the end of the meal candies are often eaten usually as a mouth refreshment or between meals.

## **1.2 Current Status**

- The India chocolate market reached a value of U.S \$ 1.9 billion in 2020 with the country currently representing one of the world's fastest growing markets for chocolates. Looking forward, IMARC Group expects the market to exhibit strong growth during 2021-2026.
- The global chocolate market reached a value of almost USD 106.6 billion in the year 2020. The industry is further expected to grow at a CAGR of 5.5% between 2021 and 2026 to reach a value of almost USD 147 billion by 2026.
- The Indian Candy market is currently valued at around \$664 million, with about 70% share (\$461 million) in sugar confectionery and the remaining 30% (\$203 million) in chocolate confectionery.
- Indian chocolate industry is estimated at US\$ 400 million and growing at 18% per annum. Cadbury has over 70% share in this market and recorded a turnover US\$ 37 m in 2008.

## **2. CHOCOLATE VARIETIES, HEALTH BENEFITS AND NUTRITIONAL VALUE OF CHOCOLATE**

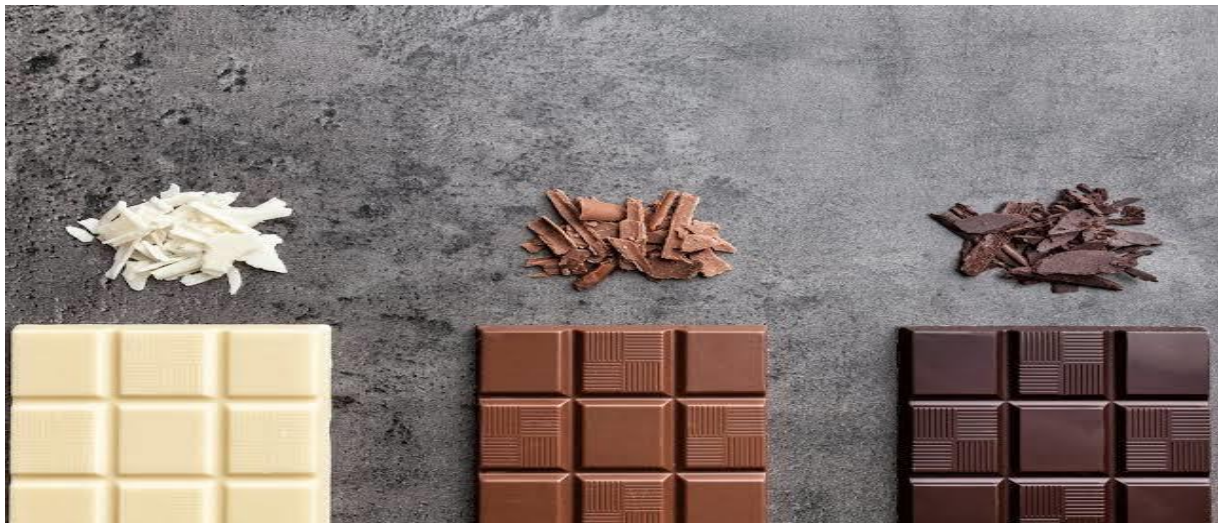
### **2.1 Chocolate Varieties**

Several Varieties of chocolate can be distinguished. Pure, unsweetened chocolate, often called “baking chocolate”, contains primarily cocoa solids and cocoa butter in varying proportions. Much of the chocolate consumed today is in the form of sweet chocolate, which combines chocolate with sugar.

- **Milk:** Milk chocolate is sweet chocolate that also contains milk powder or condensed milk. In the UK and Ireland, milk chocolate must contain a minimum of 20% total dry cocoa solids; in the rest of the European Union, the minimum is 25%.
- **White Chocolate:** White chocolate, although similar in texture to that of milk and dark chocolate, does not contain any cocoa solids that impart a dark color. In 2002, the US Food and Drug Administration established a standard for a white chocolate as the “common or usual name of products made from cocoa fat (i.e., Cocoa Butter), milk solids, nutritive carbohydrate sweeteners, and other safe and suitable ingredients, but containing no nonfat cocoa solids”.
- **Dark Chocolate:** Dark chocolate is produced by adding fat and sugar to the cocoa mixture. The U.S. Food and Drug Administration calls this “sweet chocolate” and requires a 15% concentration of chocolate liquor. European rules specify a minimum of 35% cocoa solids. A higher amount of cocoa solids indicates more bitterness. Semisweet chocolate is dark chocolate with low sugar content. Bittersweet chocolate is chocolate liquor to which some sugar (typically a third), more cocoa butter and vanilla are added. It is less sugar and more liquor than semisweet chocolate, but the two are interchangeable in baking. It is also known to last for two years if stored properly. As of 2017, there is no high-quality evidence that dark chocolate affects blood pressure significantly or provides other health benefits.
- **Unsweetened Chocolate:** Unsweetened chocolate is pure chocolate liquor, also known as bitter or baking chocolate. It is unadulterated chocolate: The pure, ground, roasted chocolate beans impart a strong, deep chocolate flavor. It is typically used in baking or other products to which sugar and other ingredients are added. Raw chocolate, often referred to as raw cocoa, is always dark and a minimum of 75% cocoa.

Poorly tempered or untempered chocolate may have whitish spots on the dark chocolate part, called chocolate bloom; it is an indication that sugar or fat has separated due to poor storage. It is not toxic and can be safely consumed.

**Figure .1 Varieties Of Chocolate**



**White  
Chocolate**

**Milk  
Chocolate**

**Dark  
Chocolate**

## **2.2 Health Benefits Of Dark Chocolate**

1. Very Nutritious.
2. Powerful Source of Antioxidants.
3. May Improve Blood Flow and Lower Blood Pressure.
4. Raises HDL and Protects LDL From Oxidation.
5. May Reduce Heart Disease Risk.
6. May Protect Your Skin from the Sun.
7. Could Improve Brain Function.
8. The treat may improve cognition, prevent memory loss, and boost your mood.
9. It fights free radicals and may play a role inn cancer prevention
10. Reduces your stress.

## 2.3 Dark Chocolate Nutritional Value Per 100 gm

Calories 546

Table No. 1: Nutritional Value per 100 gm			
		% Daily Value	
<b>Total Fat</b> 31 g		47%	
Saturated Fat 19g		95%	
Trans Fat regulation 0.1 g			
<b>Cholesterol</b> 8 mg		2%	
<b>Sodium</b> 24mg		1%	
<b>Potassium</b> 559mg		15%	
<b>Total Carbohydrate</b> 61g		20%	
Dietary Fiber 7g		28%	
Sugar 48g			
<b>Protein</b> 4.9g		9%	
<b>Caffeine</b> 43mg			
Vitamin C	0%	Calcium	5%
Iron	44%	Vitamin D	0%
Vitamin B-6	0%	Cobalamin	3%
Magnesium	36%		

## **3.PROJECT DESCRIPTION AND TECHNOLOGICAL PROCESS**

### **3.1 Project Description**

- Chocolate is made from cocoa beans found on the cacao tree.
- The cacao tree was first discovered in the South American rainforest.
- The three-main ingredient in chocolate are chocolate liquor, cocoa powder, and cocoa butter.
- Different kinds of chocolate use varying amounts of these 3 ingredients.

### **3.2 Technological Process**

Cocoa trees are native to South America, and they have a very long history of cultivation in Central America, but these days cocoa is grown in more than 40 countries located on or near the equator. Cocoa beans grown in pods, with 20 to 60 beans per pound. The number pods produced by each tree depends on several factors such as the variety of cocoa being grown, the skill of the farmer and the amount of chemical inputs than are used. But on an average, each tree produces about 75 pods per year. 75 pods will yield approximately 3 kg of dried, saleable cocoa beans.

After the cocoa pods are cut from the tree, the fresh beans must be fermented for up to a week in order to develop so called “aroma precursors”, via a series of chemical reactions. To ferment properly, the beans must be placed in a large enough pile to prevent them from drying out. Once the beans have been adequately fermented, they must be dried in order to halt the fermentation process, and remove excess moisture. Proper drying helps prevent the beans from rotting or going moldy.

- **CLEANING:**

In manufacturing of chocolate first, the beans must be clean for foreign matter such as dust, just fibers, sticks and stones. Iron debris is also cleaned up by magnets.

- **ROASTING:**



**Figure.2**

After this, roasting of cocoa beans takes place. Roasting process is done at 180 degree centigrade temperature for almost 30 min.

**Roasting accomplishes a number of things:**

- It helps separate the outer husk from the inner bean and makes cracking and winnowing much easier.
- It also virtually sterilizes the cocoa beans. This is rather important as the conditions in which cocoa beans are fermented are naturally full of bacteria, fungi, molds. There is a quantifiable risk of infection from unroasted cocoa beans. Roasting reduces this risk.
- Various chemical reactions occur when cocoa beans are roasted and proper roasting is integral to good flavored chocolate.

- **WINNOWING:**



**Figure.3**

The goal in winnowing is to crack the coca beans into pieces and then separate the husk from the nib. Top make chocolate this husk needs to be fully removed. Thus, husk is send to cattle field and it is used as food of animals. Running the roasted cocoa bean through a winnowing machine to just crack the cocoa beans into large pieces (called nibs) and then blowing husk away is another option.

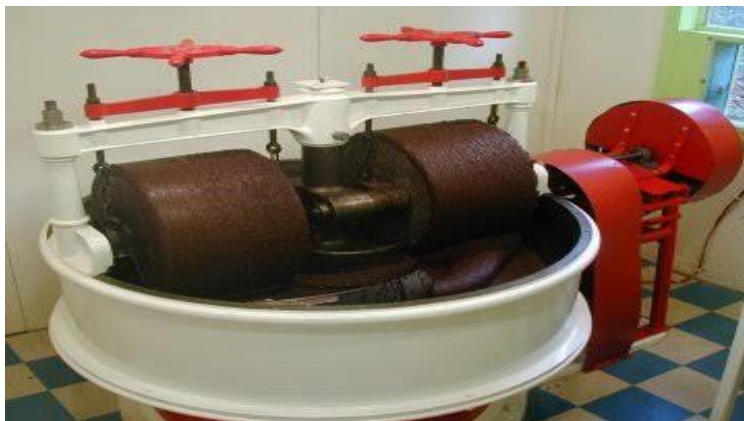
- **GRINDING:**



**Figure.4.**

After winnowing, next step in chocolate making is to grind them until they liquefy into cocoa liquor. This liquid is called cocoa mass. The temperature of this cocoa mass is 120 degrees centigrade. Then the cocoa press machine is used for separating cocoa mass into coca butter (which is liquid at an elevated temperature) and solid cakes, which can be processed into cocoa powder later. Generally, a hydraulic cylinder is provided, to make cocoa cake. During a pressure cycle the pots are filled with heated cocoa mass via supply lines and subsequently they are compressed. The cocoa butter is there by pressed out through filters and discharged. In this stage of grinding, cocoa butter and sugar is mixed in the liquid in proportionality.

- **CONCHING:**



**Figure.5**



Coaching is a modern process used in making chocolate with characteristic taste, smell and texture. Conching process is done at 80 degree centigrade. Refining is the process of reducing the particle sizes of both cocoa solids and sugar crystal in somewhere 20 – 30 microns. Your tongue loses its ability to determine texture and grittiness at around 50 microns. Under about 15 microns the chocolate can get gummy. So refining is a tough job.

- **TEMPERING:**

Chocolate tempering is needed because it is what gives the chocolate bars finished glossy, shiny appearance. At last in cavemil, the molding of chocolate liquid is done. Here temperature regulating is very important. Thus, the chocolate is made of any shape you want by this process.

- **STORAGE:**

- The Plant has very good facilities.
- Chocolates can be stored in godown for maximum to days after that it has to be delivered.

## Manufacturing Process Of Chocolate

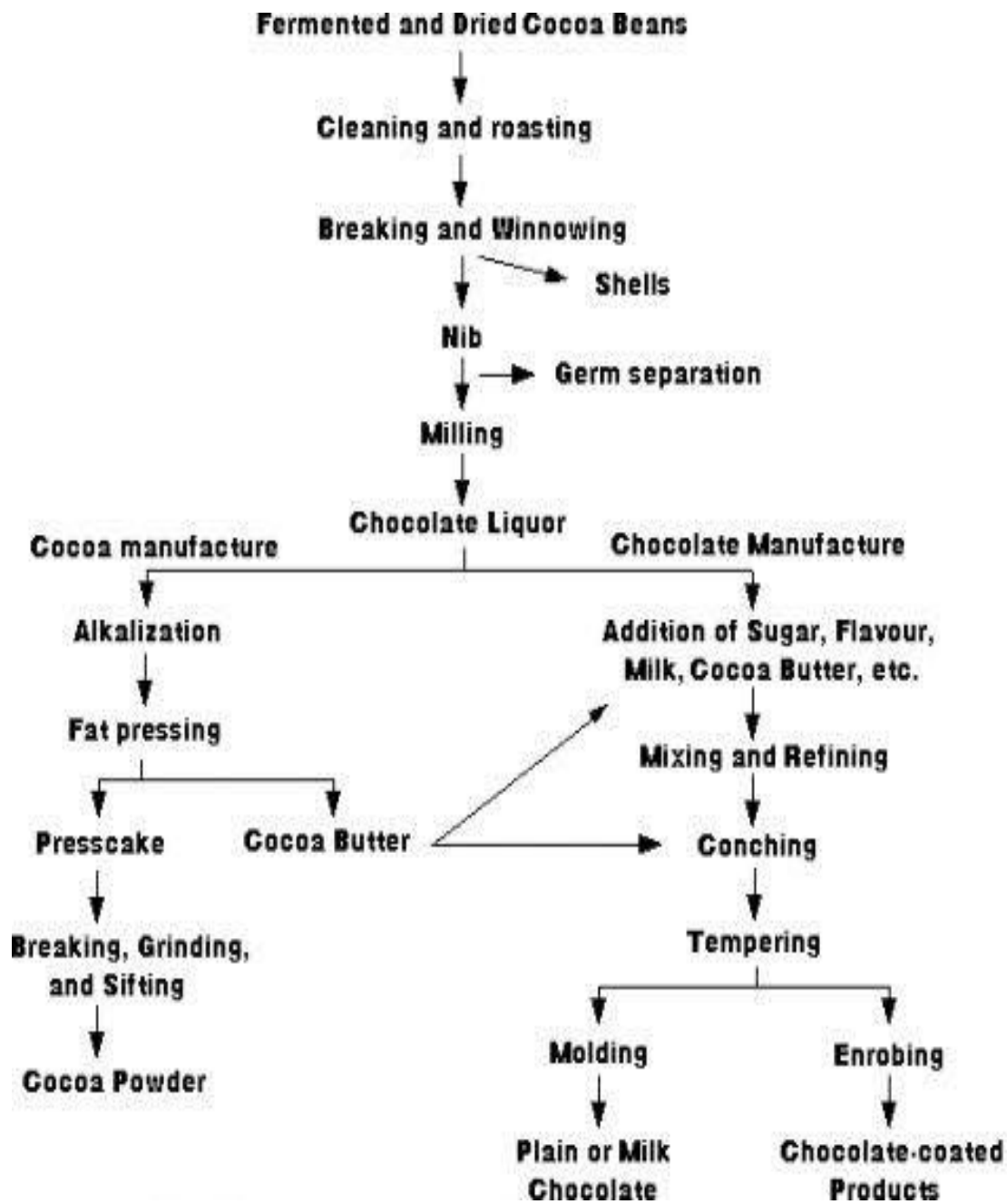


Figure.6

## **4.QUALITY CONTROL AND STANDARDS**

Cocoa is a commodity used as an ingredient in many food products as well as in chocolate manufacturing. Variations in the raw materials and processing steps creates cocoa and chocolate of varying properties. Quality is a key driver in the cocoa processing and chocolate manufacturing industries, both as payment criteria as well as final product quality control.

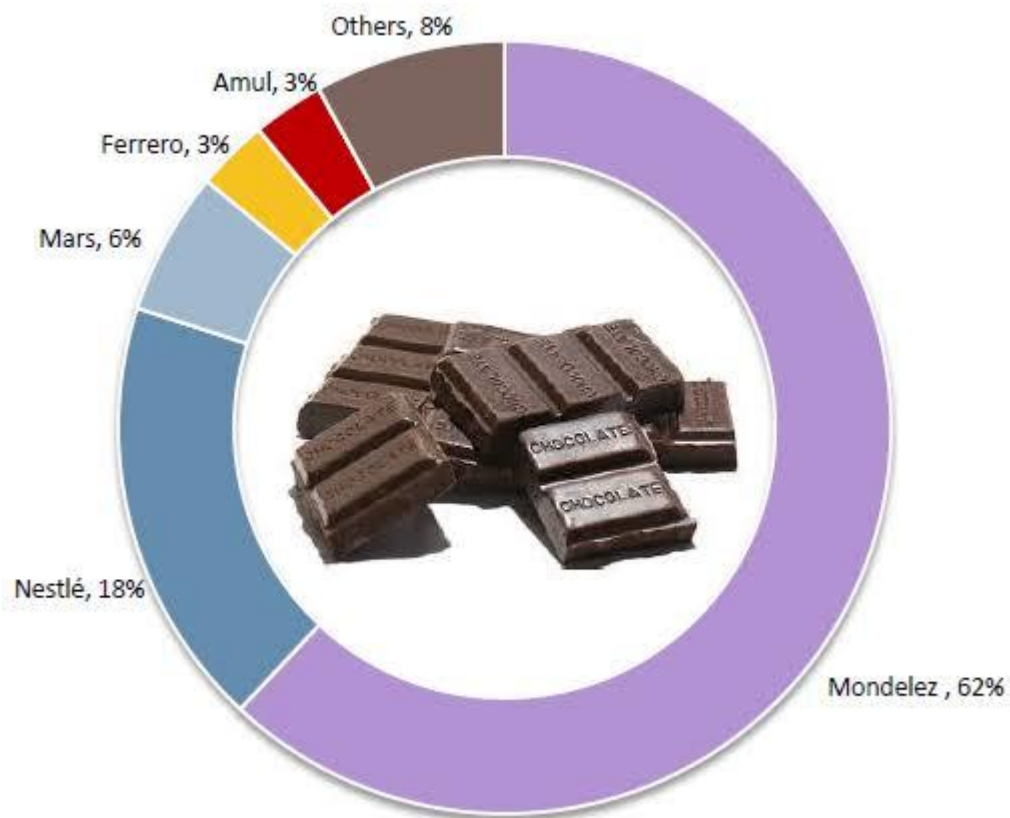
Fast, accurate analysis is critical for both cocoa processors and chocolate manufactures to optimize their process and insure quality. Optimizing the process will saved the plant time and money and provide very rapid payback. Near Infrared (NIR) analysis is a proven technique designed to provide fast, accurate, and reliable results for the cocoa industry and chocolate manufacturing industry.

### **Process Control in a Cocoa Processing Plant:**

There are multiple points in the cocoa processing and chocolate manufacturing procedures where accurate and timely analytical values can help control the process, saving money and improving quality. In addition, intermediate products in the process are sold based on quality parameters such as fat content, and real time analysis of these samples can help optimize the yield of high quality product.

## 5. PRESENT MARKET POSITION

- India emerged as one of the fastest growing markets in the world for chocolate in recent years, with a total market size of over 112.5 million Indian rupees in 2016.
- The India chocolate market is growing appetite for premium chocolate and the availability of dark chocolate brands such as Hershey, Toblerone among others has led to the increased market penetration for dark chocolates.



**Figure.7 India Chocolate Market Growth**

## 6. EXCEPTED FUTURE DEMAND

Chocolate is a millennium-old craft, at times an expression of art, but not known to be of interest to the scientific and political communities. That has changed in recent years. The transformation of ground-up cocoa beans, cocoa fat globules, milk, sugar and flavor into yummy chocolate has become a subject of intense research among nutrition scientists, manufactures, and environmental groups. Their concern: meeting rapidly growing global demand for chocolate, addressing consumer health and nutritional needs, and counteracting a dwindling supply of cocoa. The answer: new products that are healthier, tastier and more diverse than ever before.

- Less sugar, same taste? : Too many calories are the root cause of too much weight and chocolate can add quite a bit of caloric content to the diet. But without sugar, chocolate would taste awfully bitter.
- Take care of the farmer: “Buy low, sell high” is a mantra not only needed at wall street but also good business chocolate manufacturers. The lower the price of cocoa ( and, as a result, the income of cocoa farmers), the lower they could price the finished products or take a higher margins. But as global demand for chocolate increases rapidly-not just in developed, but also in emerging economies- the supply of cocoa beans is dwindling due to poor farming practices, climate change and mismanagement of nature.
- Meeting nutritional needs: As global consumer demand for foods meeting religious or dietary restrictions is on the rise, German confectionary producers-most of them small to mid-size, family-run or artisan companies-strive to meet that demand. There are dietetic, maltitol, sugar-free, gluten-free, lactose-free, vegetarian, kosher and halal chocolates and, of course, organic, fair trade and UTZ certified ones.

## **7.MARKET SIZE**

- The Indian chocolate market is valued at Rs. 650 crores (i.e. Rs. 6.50 billion) a year. The Indian chocolate bazaar is estimated to be in the region of 22,000-24,000 tonnes per annum and is valued in excess of US\$ 80 million.
- Chocolate penetration in the country is a little over 4 percent, with India's metros proving to be the big draw clocking penetration in excess of 15 percent. Next, comes the relatively smaller cities/towns where consumption lags at about 8 percent. Chocolates are a luxury in the rural segment, which explains the 2 percent penetration in villages.
- The market presently has close to 60mn consumers and they are mainly located in the urban areas.
- The size of the market for chocolates in India was estimated at 30,000 tonnes in 2008. Bars of moulded chocolates like amul, milk chocolate, dairy milk, truffle, nestle premium, and nestle milky bar comprise the largest segment, accounting for 37% of the total market in terms of volume. The chocolate market in India has a production volume of 30,800 tonnes.
- The chocolate segment is characterized by high volumes, huge expenses on advertising, low margins, and price sensitivity. The count segment is the next biggest segment, accounting for 30% of the chocolate market.
- The count segment has been growing at a faster pace during the last three years driven by growth in perk and KitKat volumes. Wafer chocolates such as KitKat and perk also belong to this segment. Panned chocolates accounts for 10% of the total market.
- The chocolate market today is primarily dominated by Cadbury and Nestle, together accounting for 90% of the market.
- The India chocolate market size was valued at US\$ 1.9 billion in 2020.

## 8. STATISTICS

### 8.1 Land & Building

Area : 28 acres

Market value: 45 lacs per acre

Building: production building

: Canteen

: Human resource office

: Storage facility

Total value of Building is approx. 50 lacs.

(depreciation – 10%)

### 8.2 Machinery & Equipment :

**Machinery used in chocolate manufacturing :**

- ROASTER
- WINNOWER
- COCOA PRESS
- GRINDER
- MIXER
- REFINING
- TEMPERING
- CAVEMIL

(Around 15% depreciation is calculated on machines according to their types)

Table No. 2 : Machinery & Equipment	
NAME	COST
Roaster	1.80 Lakh
Winnower	1.20 Lakh
Cocoa Press	2 Lakh
Grinder	1.25 Lakh
Mixer	1.80 Lakh
Refining	3.50 Lakh
Tempering	1.80 Lakh
Cavemil	27 Lakh
<b>Total</b>	<b>40.35 Lakh</b>

- ROASTER



**Figure.8**

Table No. 3 : Roaster Machine	
	Description
INPUT	Cocoa beans
OUTPUT	Dried Cocoa beans
CAPACITY	100 tons
TEMPERATURE	235 degrees
USE	Makes the beans easily refinables



- WINNOWER



Figure.9

Table No.4: Winnower	
	Description
INPUT	Dried cocoa beans
OUTPUT	Cocoa nibs
CAPACITY	150 kg
USE	Breaks beans into small pieces

- COCOAPRESS



**Figure.10**

<b>Table No.5: Cocoa Press</b>	
	Description
INPUT	Cocoa nibs
OUTPUT	Cocoa cake
CAPACITY	4 to 10 tons
USE	Separates cocoa mass into cocoa cake and cocoa butter

- GRINDER



**Figure.11**

<b>Table No. 6 : Grinder</b>	
	Description
INPUT	Cocoa cake
OUTPUT	Cocoa powder
USE	Grinds cocoa cake and turns into powder

- MIXER



**Figure.12**

Table No.7 : Mixer	
	Description
INPUT	Solid cocoa powder, cocoa butter, sugar
OUTPUT	Liquid cocoa
CAPACITY	500 to 1500 kg.
USE	Makes thick liquid chocolate

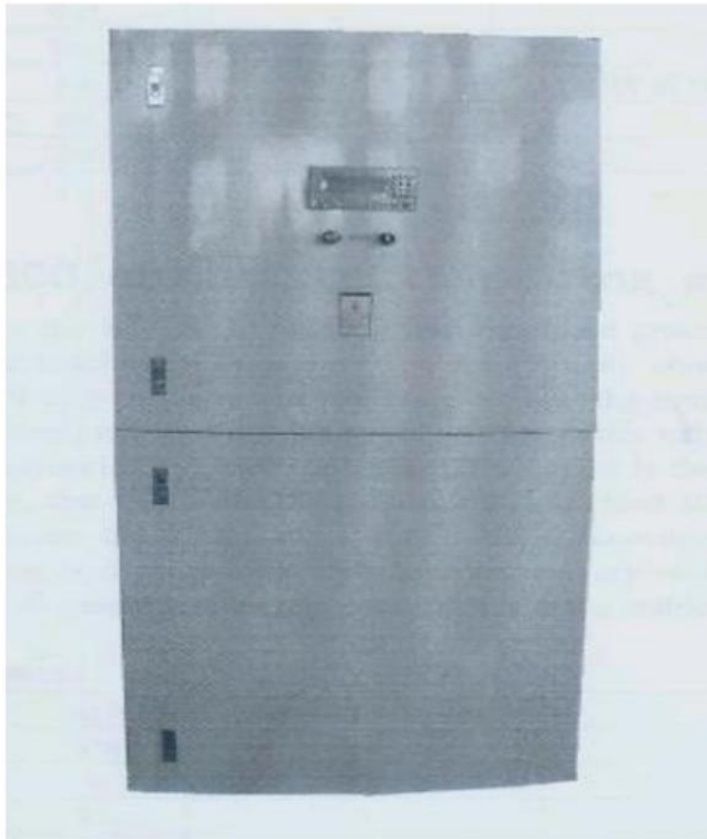
- REFINIG MACHINE



**Figure.13**

Table No.8; Refinig Machine	
	Description
INPUT	Liquid chocolate
OUTPUT	Smooth liquid chocolate
CAPACITY	700 to 1200 kg
USE	Smoothing of liquid chocolate

- TEMPERATING



**Figure.14**

Table No. 9 : Tempering	
	Description
CAPACITY	600 to 6000 kg
USE	To regulate chocolate syrup temperature

- CAVEMIL



**Figure.15**

<b>Table No. 10 : Cavemil</b>	
	Description
INPUT	Cocoa liquid
OUTPUT	Molded chocolate
USE	The molding plant which gives a particular shape to chocolate liquid.

## 8.3 Furniture

### Types of furniture in factory:

The depreciation on each computer is 60% and on other furniture is 10%.

Table No. 11: Furniture		
Type	Units	Cost (Rs.)
Tables	6	15,000
Sofa- set	2	26,000
Computers	5	75,000
Exhaust fans	6	6,000
Air conditions	3	66,000

## 8.4 Utilities & Facilities

**Power Supply:** As uninterrupted power supply is one of the basic necessities for production of chocolate.

The electricity consumption is around Rs. 20 lakh per month.

**Water Supply:** Water Supply is as good as power supply. The plant is supplied water by 'Nagarpalika'.

Table No. 12: Utilities and Facilities	
Utilities and Facilities	Per Month
1. Power	Rs. 20 Lakh
2. Water	



## 8.5 Project At Glance

### Cost of Project

(In Lacs)

Table No. 13: Cost of Project			
Particulars	Existing	Proposed	Total
Land & Site Development Exp.	0.00	507.50	507.50
Building	0.00	181.25	181.25
Plant & machineries	0.00	305.99	305.99
Motor Vehicles	0.00	6.00	6.00
Office Automation Equipment	0.00	27.75	27.75
Technical Knowhow Fees & Exp.	0.00	12.00	12.00
Franchise & Other Deposits	0.00	0.00	0.00
Preliminary & Pre-operative Exp.	0.00	2.00	2.00
Provision for Contingencies	0.00	11.00	11.00
Margin Money-Working Capital	0.00	4.42	4.42
TOTAL	0.00	1057.91	1057.91

### MEANS OF FINANCE

(In Lacs)

Table No. 14: Means of Finance			
Particulars	Existing	Proposed	Total
Capital	0.00	264.48	264.48
Share Premium	0.00	0.00	0.00
Other Type Share Capital	0.00	0.00	0.00
Reserves & Surplus	0.00	0.00	0.00
Cash Subsidy	0.00	0.00	0.00
Internal Cash Accruals	0.00	0.00	0.00
Long/Medium Term Borrowings	0.00	793.43	793.43
Debentures/ Bonds	0.00	0.00	0.00
Unsecured Loans/Deposits	0.00	0.00	0.00
TOTAL	0.00	1057.91	1057.91

## 8.6 Plant Location

Plant location refers to the area where the plant operate to produce goods and services.

**Plant location comprises:**

- Selection of a large general area such as states, districts or towns, where production and distribution activities are carried on.
- Selection of a site which is smaller area within the general area for setting up a factory.

## 8.7 Plant Layout

It refers to the scientific arrangement of Machine, tools and other various departments to secure smooth conduct of manufacturing process.

**Factors which determine the plant layout:**

- Objective of business
- Managerial Policies
- Types of machines
- Quantity and type of product
- Production process
- Availability of raw materials
- Storage facilities
- Scope of future development

## 8.8 RAW MATERIALS

- COCOABEANS



**Figure.16**

The Cocoa-bean—the heart of the sweetest delicacy in the world--

Although other ingredients are added, most notably sugar or other sweeteners, flavoring agents, and sometimes potassium carbonate (the agent used to make so – called dutch cocoa), cocoa beans are the primary components of chocolate.

There are two quite different basic classifications of cocoa, under which practically all varieties can be categorized Criollo and Forastero cocoas. In India coco beans are grown in South India.

- **Sugar**  
Sugar obtained from local supplier in bulk as sugar is an essential in many of their many products.
- **Cocoa Butter** Cocoa Butter, also called theobroma oil or Theobroma cacao, is a pale-yellow, pure edible vegetable fat extracted from the cacao beans. It is used to make chocolate pharmaceuticals, ointments.  
Cocoa butter has a mild chocolate flavor and aroma.

Cocoa beans are ground into chocolate liquor and press to separate the cocoa butter from the cocoa solids. Cocoa butter can alternately be extracted from whole beans by the broma process. It is most often deodorized to remove its strong and undesirable taste.



**Figure.17**

**Raw Material Required For 4,50,000 Units:**

<b>Table No. 15: Raw Material</b>		
<b>SR.NO</b>	<b>MATERIAL</b>	<b>AMOUNT (In Rs.)</b>
1.	Sugar	3,00,000
2.	Cocoa Butter	3,00,000
3.	Cocoa Solids	3,20,000
4.	Milk Solids	2,00,000
<b>TOTAL</b>		<b>11,20,000</b>

## 9.TRENDS

(Consumer trends)

- People travel abroad brings chocolates back, which is helping in changing the perception of chocolate in the country.
- A growing trend in premium as well as dark chocolate as people pay more attention to health and sugar reduction now. The demand for organic, vegan, sugar-free, and gluten-free in chocolates is growing. From July 2016 to June 2019, more than 3% of chocolate confectionary launches carried a no-added-sugar claim in India.
- India is still a relatively price- sensitive market. While Indian consumers loved chocolate, they have become pickier. This means they are more willing to pay more for better quality chocolate.
- There is also a growing trend in gifting chocolate in India.
- Consumers have started consuming chocolate for emotional reason, such as to boost their mood or to reward themselves, as well as for functional benefits like to boost energy levels.
- Consumers have started moving towards smaller packs and bite-sized portions are gaining popularity in India which hints at increasing health-consciousness among Indian consumers who are trying to control portion size. Between time period August'17-July'18 and August'18-July'19, the percentage of individually wrapped chocolate launches doubled, increasing by 50.4%.

## 10. SWOT ANALYSIS & FORECAST

### 10.1 Swot Analysis

The size of the chocolate market in Mumbai is about 1.05 tonnes and is value at Rupees 10.2 million khroma chocolate has the biggest market share at 58 per cent while other brands has captured 20% of market.

Chocolate is impulse category

The impulse category is finally driven by visibility and purchasing power of consumers. Traditionally, this is how product are positioned within the impulse category. In the past, chocolate companies used to consider only the different brands in the chocolate market as their competitors.

#### **Strength:**

1. Easy availability of water, power, etc.
2. Availability of raw materials.
3. Proximity to market.
4. Easy availability of transportation.
5. Easy availability of skilled and unskilled labour at cheaper rate.
6. Stores are available in almost every market.
7. Infrastructure availability.
8. Strong partnership with retailers.
9. Good brand position and quality which is consumer favorites.

#### ▪ **Weakness:**

1. Lack of product mix or product basket as other brands has.
2. Lack of innovative and designer chocolates in the festivals season.
3. Still not a export quality.
4. Packaging is not attractive.
5. Followed single flavor.
6. No verities other than chocolate candy like wafer, milk drinks has been introduced yet.
7. Single manufacturing unit at one place lack of new technology to produce fine chocolate.
8. More transportation cost of Raw material.
9. Less capital investment as compared to big competitors.

#### ▪ **Opportunities:**

1. Cover the areas near Mumbai where chocolates demanded high as Goa.
2. Increase personal relation in villages also.
3. As the harbor is near, can export the products by increasing Quality and range to the small countries.
4. Growing population
5. High standard of living

6. Rural population is becoming potential customers of chocolate due to eye catching advertisements.
7. Because of trends preferences and culture, chocolate has become part of social functions like birthday parties, marriages etc.

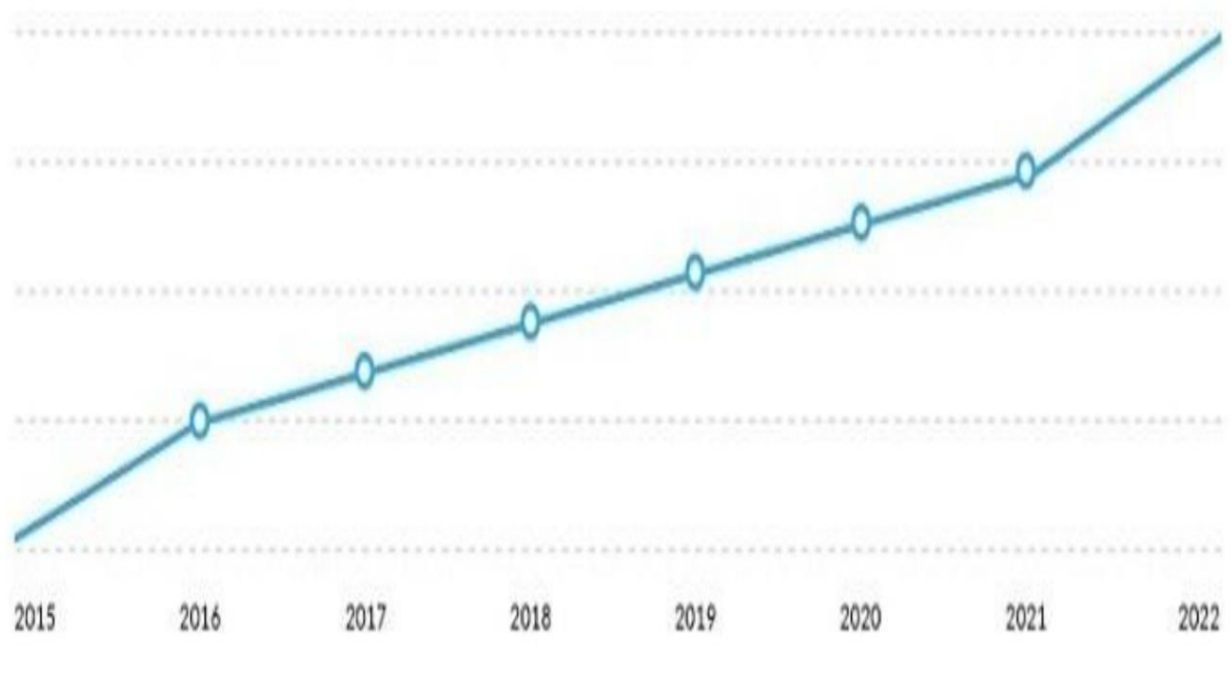
▪ **Threats:**

1. Many big players have major position in the market like Cadbury nestle, KitKat.
2. In peak time Public purchased generally branded chocolates and local manufacturers are ignored.
3. Highly qualified employees in big brands.
4. Huge investment on advertisement by other brands.
5. Change is needed according to trend and customers preferences.

## 10.2 Forecast

### Global Confectionery Market, Opportunities and Forecast, 2014-2022

Global confectionery market is expected to reach \$232,085 million by 2022,  
growing at a CAGR of 3.4% (2016-2022)



**Figure.18**

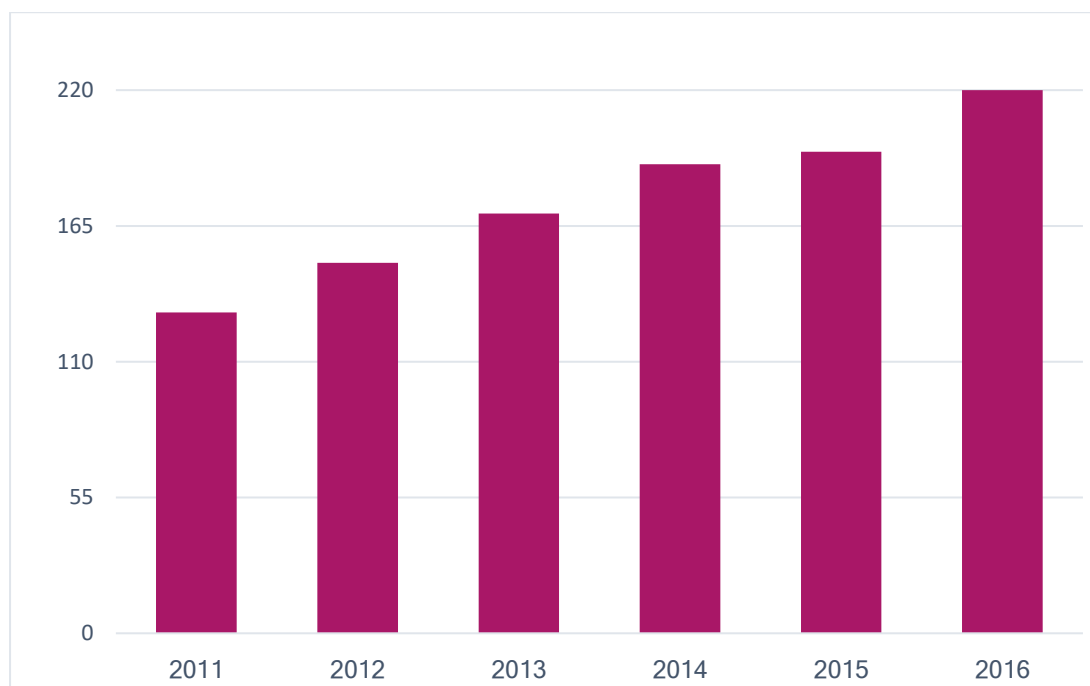


- Product innovation in terms of formulation, processing, and packaging is the major factor that drives the growth of the confectionary industry. Moreover, retail market expansion and economic growth is advanced & emerging economics supplement the market growth. Asia-Pacific confectionary market showed the highest growth rate in 2015. Product portfolio extensions and new brand launches from established players are significant factors that fuel the market growth in Asia-Pacific. Key players in the region largely invest on advertising campaigns and marketing to enhance their brand recognition and influence in the confectionery industry. Ferrero China Ltd., a confectionary company promotes its products as gifts for wedding and other occasions.
- Fluctuation in prices of raw materials, growth in health awareness among consumers about sugar intake, and diverse consumer spending habits limit the confectionery market growth. Rise in demand for low-calorie, organic, sugar-free and functional products provide lucrative growth opportunities to the confectionary industry.
- Confectionary market is segmented on the basis of type and region. Based on type, the market is categorized into sugar, chocolate, fine bakery wares, and others. In terms of sugar confectionery, the market is divided into hard-boiled sweets, caramel & toffees, gums & jellies, medicated confectionery, mints, and others. Chocolate confectionery is sub segmented into white, milk, and dark chocolate. Geographically, the market is analyzed across North America, Europe, Asia-Pacific, and LAMEA.

## 11. MARKET GROWTH DRIVERS

- The per-capita income of the Indian population has increased, thus increasing the disposable income in their hands.
  - Chocolates have become a part of casual snacking, unlike a earlier when they were consumed just for special occasions.
  - The growing population of the younger generation is a major behind the chocolate industries rapid growth.
  - Westernization and change in lifestyle also aid in the growth of the industry.
- 
- The global chocolate market is driven by the **impulse buying behaviour** of consumers across the globe. Children and grown-ups buy chocolates regardless of their economic situation as chocolates are related to impulse purchases. The industry is aided by the inflating income levels and the shifting lifestyles of the consumers.

## 12.India's Growing Appetite For Chocolate



**Figure.19**

- Chocolate confectionary is projected to see a 4% retail value CAGR at constant 2017 prices over the forecast period to reach INR148 billion in 2022. A rising penetration rate, including among ruler consumers, and a growing fondness for chocolate as a healthy snacks option are expected to stimulate sales.
- Globally, India is amongst the fastest growing chocolate markets. In 2016, the chocolate market in the country grew by 13% year-on-year. Other than India, Poland's market which grew at 2% year-on-year are the only 2 countries globally have shown growth in the chocolate market.
- "Consumers are fast shifting towards niche and premier chocolate varieties and there is tremendous demand for dark chocolates as they have less sugar and more cocoa taste. India is a nation of Chocoholics and the country has one of the world's fastest growing chocolate market which posted a huge 13per cent sales growth last year.
- India's chocolate market has a positive outlook due to exceptional growth in the confectionary industry, rising per capita income and gifting culture in the country. Over the years, changes in consumers' preferences and lifestyle, eating habits, and their global exposure to international brands have given a boost to the chocolate industry.
- The India Chocolate market is expected to reach USD 5.01 billions by 2023, witnessing a robust CAGR during the forecast period. Chocolate consumption volume in the region surpassed 193 million Kg in 2017, with Moulded Chocolate registered the largest volume sale. Rising per capita income and westernization tend to be the key driver for the market. Expanding retail channel and impulse purchase are further driving the market. Growing demand for premier varieties gives a potential opportunity for foreign brands to tap the market
- Rising demand for premier and dark chocolate as a result of growing affluent middle-class purchasing power coupled with marketing and promotional activities triggered the chocolate demand.
- Consumer demand for high cocoa content in chocolate and consumer awareness related to cocoa benefits are driving the dark chocolate market. Moulded dominates the Indian chocolate retail sale followed by count lines. The sale of box assortment is growing at a faster pace driven by increase in occasional gifting trend. Heavy price and discount offered at supermarket/ hypermarkets and healthy eating habits are another factor boosted sales.
- The Indian chocolate market in recent years has been witnessing tremendous growth in terms of value as well as volume. The governance of market is maintained by large international giants through franchisee and expansion into new markets which is leading to the growth of the chocolate industry in India. India is a market of huge opportunity and it will continue to grow at a healthy rate in the next few years to come.
- Urban people are becoming more aware and conscious about chocolate brands and thus dominate the chocolate consumption heavily. Affluent urban consumers are now even demanding premium chocolates which are more costly than the regular ones. Manufacturers are taken to tap this section of consumer and are introducing premium or higher-priced products into the market.
- The chocolate industry is also considered as the most popular product in the food processing sector. With the demand of premium high end chocolate going up in the market; international companies are entering into the market through collaborations and acquisitions in order to increase share in the market.

- India chocolate is divided into four segments where Bars chocolate segment accounts for maximum share of 36%. However, the demand of assorted chocolates is expected to increase with the highest growth rate within next 5 years considering increasing gifting culture in the country followed by growing demand for luxury chocolates.
- The chocolate industry has a considerable growth potential in the country but the area of concern lies in high input cost of raw materials such as sugar, cocoa, milk powder and increasing packaging cost. Increasing tariffs and rising customs duty also makes the imported chocolate costly thereby affecting the sales of premium chocolates in the country.
- Chocolate market is segmented on the basis of products such as dark chocolate, milk chocolate and white chocolate. Dark chocolate consists of more than 60% cocoa contained and is known to have health benefits which such as reducing risk of cardiovascular diseases and improving blood flow are likely to propel its demand over the next six years.
- Global chocolate market witnessed substantial growth over the past decade and is expected to follow similar a growth trend over the forecast period owing to changing taste preferences and improving lifestyle of consumers especially in the Asia Pacific region.
- One of the most consumed and popular food product among consumers across the globe is chocolate. Based on the amount of cocoa employed during preparation, different varieties of chocolates are produced globally.
- As the global chocolate market is highly driven by the taste preferences of consumers, it is imperative that companies focus on product development and marketing strategies to gain a wider consumer base and capture new markets.
- The growth of the global chocolate market is primarily driven by the rising awareness among consumers regarding the health benefits associated with cocoa-rich dark chocolates. This trend is anticipated to boost the popularity of chocolate across the globe. The popularity of dark chocolate is expected to rise over the forthcoming years owing to the fact that it helps in preventing cardiac diseases, in addition to other benefits.
- Chocolate is widely popular for individual consumption, as gifts and for the purpose of baking and cooking. Due to the dominance of large-scale production dynasties, franchise and small business tend to focus on unique or specialty items and services. The demand for cocoa is predicted to rise by 30% by 2020, the industry is all set to ignite for a country like India. The chocolate industry offers a wide variety of opportunities for the small business owners too. The industry growth will be driven by population growth as well as expansion into new markets, product innovation and rising disposable income levels leading to a greater purchasing of premium offerings.
- The global market for chocolate is expected to witness a robust CAGR. A host of trends and opportunities that are currently driving the market are slated to shape up the market condition during the forecast period.
- Chocolate is one of the most profitable components of the confectionary industry globally. The chocolate has been representing a multibillion dollar market since the past decades and is expected to reach new levels of growth within the next few years. Rising awareness about health benefits of consuming a chocolate on a daily basis, will remain a key booster to the global chocolate market over the next few years.

- It is expected that the global chocolate market will grow at a CAGR of approximately to 5% through 2020. New flavors coupled with product packaging innovations will be the trend going forward. World over there is growth potential in the customized and luxury chocolate segments. People have a rising affinity for handcrafted chocolate and many startups are dabbling in the art of the chocolate making. Popularity of premium chocolates is on the rise particularly in the United States and Brazil. While rising obesity and health concerns worldwide is a challenge for the growth of the sector, there is also growing awareness about the benefits of dark chocolate. Players have also been introducing low sugar and sugarless chocolates.
- Increasing population of the country, rising disposable income coupled with innovation product offerings by major players along with aggressive product marketing and robust supply chain network with increasing penetration in rural areas are few of the major factors fueling the demand of candies in India.
- Candy market in India is anticipated to grow at a CAGR of over 9% during 2016-2021, on account of rising middle class households, coupled with increasing working as well as youth population. The most dominant segment in the country's candy market is sugar candy.
- Rapid modernization, continuously rising innovative and premium product launches, growing e-commerce market coupled with expanding organized retail channels and synchronized distribution networks are projected to drive candy market in India in the coming years.
- Most part of India is still poorly developed or undeveloped. However, increase in personal disposable income and rising standards of living due to westernization has shifted the mindset of consumers from saving to consumption and spending on lifestyle. The spending power of consumers in India is projected to increase due to rising middle class household. Today, consumers are willing to entertain quality products, irrespective of the price constraints and this is why the premium products in candy market are picking up speed in India.
- Rising young population base in the country coupled with increasing preference for imported products which backed by aggressive marketing and promotional campaigns by foreign players, innovation product offering and more than ever evolving distribution network with increasing penetration in rural areas are few of the factors aiding to the growing demand of candies in India.
- Candies are also treated as the replacement for expensive chocolates by consumers. This is forecast to drive the candy market in the country.
- Global Confectionary Market size was valued at \$184,056 million in 2015, and is expected to reach \$232,085 million by 2022, supported by a CAGR of 3.4% during the forecast period 2016 – 2022. Confectionery market comprises array of food products such as chocolates, raw pastes, and various sugar-based products. In addition, it includes therapeutic and dietetic confectioneries that differ in formulations from traditional confections. The preferred type of confectioneries often differ according to the geographical regions due to difference in regulatory norms and other factors such as economy and taste & preference of customers. The global confectionary market is growing at a steady pace owing to high demand from middle-class consumers.

### **13.FACTORS LIMITING MARKET GROWTH**

Food security remains a serious problem, especially in developing countries where the challenge of the sustainable food supply is exacerbated by the rapid rise in the population, limited access to food intake, vulnerability, price volatilities, protection measures imposed by the government, and other distorting influences. Russia is classified as a middle-income country that is nationally self-sufficient in its food supply. However, amid the economic recession and restrictions on foreign trade in food, many households in Russia are becoming increasingly vulnerable to food insecurity. In the case of Russia, this paper aims to assess the sustainability of the food supply; and identify the factors that affect food security. In order to establish the impact of socio-economic variables on food security at the macroeconomic level, a regression model was estimated. The study has identified the factors that influence food security in terms of agricultural production, food self-sufficiency, and foreign trade. The relationships between the regressands and corresponding regressors have been discovered, in view of alternations between positive and negative influences on the dependent variables. Additionally, a significance of the relationships has been measured. The results of the regression analysis suggest that the sustainability of the food supply in Russia is threatened by inflation and a degrading purchasing power of the population from people shifting towards cheaper products of lower quality, while exporters seek higher profits outside the country and thus create food shortages in the domestic market.

## **14.CURRENT MARKET TRENDS**

(LATEST TRENDS)

### **Technological Advancements Contribute to the increasing Demand for Premium Chocolates**

Evolving consumer preferences towards innovative & novel products has necessitated manufacturers to introduce new products in the market. New products in the market. New technologies for chocolate confectionery formulation along with the beneficial natural flavors and other ingredients have given rise to a new phase in this industry. Consumers are willing to spend more for premium and crafted products. Premiumization is a budding trend driving the demand for premium and luxury chocolates in developed economies. Cocoa is emerging as a healthy ingredient owing to its richness in antioxidants & minerals. Higher cocoa content is perceived to have low sugar content, ultimately flourishing the dark chocolate segment. For instance, MycoTechnology, Inc. uses mushrooms to create sweeter chocolates with less sugar. The company also claims that its technology helps in reducing the sugar content by 70% in chocolate products.

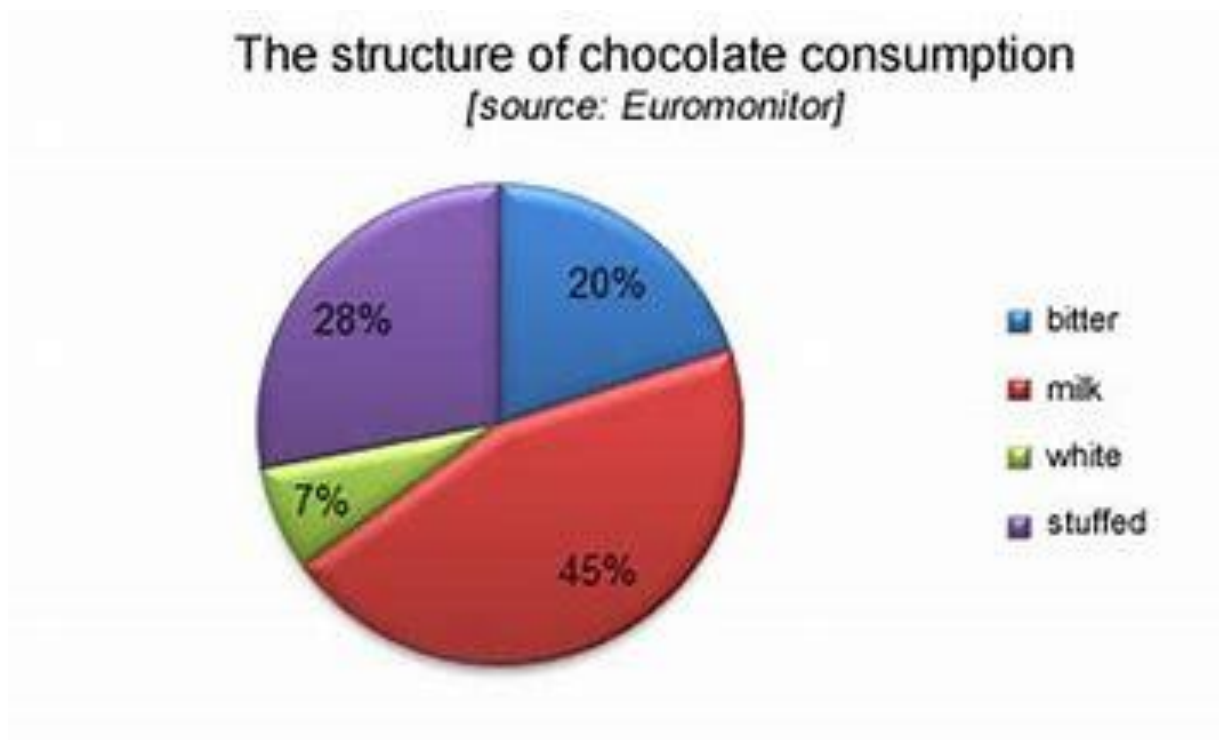


## 15.MARKET STRUCTURE

The term structure refers to something that has organization and dimension-shape, size and design; and which is evolved for the purpose of performing a function. The term market structure refers to the size and design of the market. It also includes the manner of the operation of the market. Some of the expressions describing the market structure are:’

1. Market structure refers to those organization characteristics of a market which influence the nature of competition and pricing and affect the conduct of business firms.
2. Market structure refers to those characteristics of the market which affects the traders’ behavior and their performances.
3. Market structure is the formal organization of the functional activity of a marketing institute.

An understanding and knowledge of the market structure is essential to identify the imperfections in the performance of a market.



**Figure.20**

## **16.KEY HIGHLIGHTS**

- India Chocolate Market analysis and forecast, in terms of value.
- Comprehensive study and analysis of market drivers, restraints and opportunities influencing the growth of the India Chocolate Market.
- India Chocolate Market segmentation on the basis of type, source, end-user, and region (country-wise) has been provided.
- India Chocolate Market strategic analysis with respect to individual growth trends, future prospects along with the contribution of various sub-market stakeholders have been considered under the scope of study.
- India Chocolate Market analysis and forecast for five major regions namely North America, Europe, Asia Pacific, the Middle East & Africa (MEA) and Latin America along with country-wise segmentation.
- Profiles of key industry players, their strategic perspective, market positioning and analysis of core competencies are further profiled.
- Competitive developments, investments, strategic expansion and competitive landscape of the key players operating in the India Chocolate Market are also profiled.