

BAKERY PRODUCTS



Visvesvaraya Trade Promotion Centre (VTPC)

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PREFACE

With a robust agro potential the Country has, the Government of India has launched the One District One Focus Product Scheme (ODOFP) for agriculture sector by the Ministry of Food Processing Industries. Among its primary objectives, the ODOFP initiative aims to enhance the value of the products which is eventually expected to boost employment and income levels of the farmers. The identified products across the country is available at <https://www.nfsm.gov.in/odopstatecropsreport.aspx>

Karnataka has identified its product mix with high demand and export potential across all the districts. The implementing agency for this initiative is the Karnataka State Agricultural Produce Processing and Export Corporation Limited (KAPPEC), the nodal agency in the State.

VTPC being the nodal agency for promotion of exports from the State has made an attempt to draw the action plan district wise, to capture the potential, present status and future prospects in domestic and international markets. Besides, detailed insights have been provided into the biological description of the product, their local, national and international varieties, export-import analysis, HS codes. For a holistic perspective for those concerned, each report also provides SPS standards, processing technologies available, export grading and packing specifications, and suggested pivotal roles and responsibilities among the government departments, boards, corporations and Universities.

Presenting the Action Plan/Report for Bakery Products, a ODOFP product mapped to Bangalore urban district of Karnataka, formulated by VTPC. I sincerely hope that this ready reckoner with first-hand information regarding the farming sector would help all those concerned, especially the FPOs and food processing entrepreneurs who have a desire to focus on exporting this product.

S.R Satheesha

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Content

Page no.

Introduction

01

Bakery Industry in India

04

Bakery products and their HS codes

07

World demand and prospects

07

World Export and Imports

08

Export Performance of last 4 years value in Mn USD

11

Export Analysis of Bakery products (Karnataka)

12

SPS -TBT Standards for Banana

14

Processing technologies are available through CFTRI, Mysore

15

Action plan

16

Opportunities in Bakery and related products

16

Responsibility Matrix

17

Regulators and Service providers

17



Introduction

Baked goods have been around for thousands of years. The art of baking was developed early during the Roman Empire. It was a highly famous art as Roman citizens loved baked goods and demanded them frequently for important occasions such as feasts and weddings. Because of the fame of the art of baking, around 300 BC, baking was introduced as an occupation and respectable profession for Romans. Bakers began to prepare bread at home in an oven, using mills to grind grain into flour for their bread. The demand for baked goods persisted, and the first bakers' guild was established in 168 BC in Rome. The desire for baked goods promoted baking throughout Europe and expanded into eastern parts of Asia. Bakers started baking bread and other goods at home and selling them on the streets. This trend became common, and soon, baked products were sold in the streets of Rome, Germany, London, and more.

A system of delivering baked goods to households arose as the demand increased significantly. This prompted bakers to establish places where people could purchase baked goods. The first open-air market for baked goods was established in Paris, and since then bakeries have become a commonplace to purchase delicious goods and socialize. During the colonial era, bakeries were commonly viewed in this way.

Baking as an Industry

Based on historical social and familial roles, baking has traditionally been performed at home by women for day-to-day meals and by men in bakeries and restaurants for local consumption. When production was industrialized, baking was automated by machines in large factories. The art of baking remains a fundamental skill and is important for nutrition, as baked goods, especially bread, are a common and important food, both from an economic and cultural point of view.

The aroma and texture of baked goods as they come out of the oven are strongly appealing but is a quality that is quickly lost. Since the flavour and appeal largely depend on freshness, commercial producers have to compensate by using food additives as well as imaginative labeling. As more and more baked goods are purchased from commercial suppliers, producers try to capture that original appeal by adding the label "home-baked." Such attempts seek to make an emotional link to the famed freshness of baked goods as well as to attach positive associations the purchaser has with the idea of "home" to the bought product. Some makers of

snacks such as potato chips or crisps have produced baked versions of their snack products as an alternative to the usual cooking method of deep-frying in an attempt to reduce their calorie or fat content.

Some bakeries provide services for special occasions (such as weddings, anniversaries, birthday parties, business networking events, etc.) or customized baked products for people who have allergies or sensitivities to certain foods (such as nuts, peanuts, dairy or gluten, etc.). Bakeries can provide a wide range of cake designs such as sheet cakes, layer cakes, wedding cakes, tiered cakes, etc. Other bakeries may specialize in traditional or hand-made types of baked products made with locally milled flour, without flour bleaching agents or flour treatment agents, baking what is sometimes referred to as artisan bread.

Equipment

Baking needs an enclosed space for heating – typically in an oven, but can also be done in hot ashes, or on hot stones. Formerly, primitive clay ovens were in use. The fuel can be supplied by wood, coal, gas, or electricity. Heat is gradually transferred from the surface of cakes, cookies, and loaves of bread to their center. As heat travels through, it transforms batters and doughs into baked goods and more with a firm dry crust and a softer center. Baking can be combined with grilling to produce a hybrid barbecue variant by using both methods simultaneously, or one after the other. Baking is related to barbecuing because the concept of the masonry oven is similar to that of a smoke pit. Adding and removing items from an oven may be done by hand with an oven mitt or by a peel, a long-handled tool specifically used for that purpose. Many commercial ovens are equipped with two heating elements: one for baking, using convection and thermal conduction to heat the food, and one for broiling or grilling, heating mainly by radiation. Asian cultures have adopted steam baskets to produce the effect of baking while reducing the amount of fat needed.

Process

Eleven events occur concurrently during baking, some of which (such as starch gelatinization) would not occur at room temperature.

- ① Fats melt,
- ② Gases form and expand
- ③ Microorganisms die
- ④ Sugar dissolves
- ⑤ Egg, milk, and gluten proteins coagulate



- ☉ Starches gelatinize or solidify
- ☉ Liquids evaporate
- ☉ Caramelization and 'Maillard browning' occur on the crust
- ☉ Enzymes are denatured
- ☉ Changes occur to nutrients
- ☉ Pectin breaks down.

The dry heat of baking changes the form of starches in the food and causes its outer surfaces to brown, giving it an attractive appearance and taste. Browning is caused by the caramelization of sugars and the Maillard reaction. Maillard browning occurs when “sugars break down in the presence of proteins because foods contain many different types of sugars and proteins”. Maillard browning contributes to the flavour of a wide range of foods, including nuts, roast beef and baked bread.

The baking process does not require any fat to be used to cook in an oven. Higher levels of fat such as margarine, butter, lard, or vegetable shortening will cause an item to spread out during the baking process. The moisture is never entirely "sealed in"; over time, an item being baked will become dry. This is often an advantage, especially in situations where drying is the desired outcome, like drying herbs or roasting certain types of vegetables. Over time, pieces of bread harden and become stale. This is not primarily due to moisture being lost from the baked products, but more a reorganization of how the water and starch get associated as time passes by. This process is similar to recrystallization and is promoted by storage at cool temperatures, such as in a domestic refrigerator or freezer.

Some of the commonly known bakery products are Bread, Bread rolls, Flatbreads, Bagels, Doughnuts, Muffins, Pizzas, Buns, Pastries, Pies, Crumpets, Tarts, Brownies, Cakes, Croissants, Cupcakes, Cookies, Scones, Barnbrack, Soda bread, Biscuit (bread), Crackers, Biscuits, Pretzels, Biscotti, Kalakukko, Cornbread, Pandesal, Pumpkin bread, Pita, Sourdough, Waffles, Puff.



Bakery Industry in India

The bakery industry in India is the largest of the food processing segments with an estimated annual turnover of about \$ 7.60 billion in 2020. The growth and spread of the bakery market is largely driven by a thriving biscuits and cookies industry which accounts for nearly 72% of the sales in the Indian bakery market. The penetration of cookies and biscuits in both the urban and the rural market is increasing owing to their affordable price and ready to eat nature.

India is the second-largest producer of biscuits in the world. However, it is the world's largest biscuit consuming nation with an estimated turnover of \$ 4.65 billion in 2020. In addition to this, the growth of the fast-food chains in recent years has further boosted the demand for bread as they are used for sandwiches, burgers, snacks, etc. The introduction of value-added bakery products has expanded its market base.

Bread and biscuits form the major baked foods accounting for over four-fifths of total bakery products produced in the country. India enjoys a comparative advantage in manufacturing, with an abundant supply of primary ingredients and a cheap workforce, which support the growth of the industry.

The cake market is forecasted to reach \$ 882.24 million by 2024 growing at an annual compound rate of 12.5% during 2019 to 2024. As the consumption of cakes is gaining market traction, owing to consumers' changing perceptions, as well as their convenience and health attributes, the demand for on-the-go cake products, which are baked off or made at the convenience of the consumer is rising sharply.

Growth trend and future potential

The bakery industry is experiencing robust growth of over 9%. It's a huge industry employing a large number of people. In fact, with over a million unorganised small scale bakeries and more than 2000 organized or semi-organized bakeries, it is the largest of all the segments of India's food processing industry. A report by the IMARC Group, "Indian Bakery Market: Industry Trends, Share, Size, Growth, Opportunity and Forecast 2020-2025" the Indian bakery market was worth \$ 7.22 billion in 2018. The market value is projected to reach \$ 13.3 billion by 2025, expanding at an annual compound rate of 9.1% during the period. Organic bakery products, due to their high nutrient value and affordability, have now become an item of huge consumption which has also shown a strong demand growth for bakery products in India.

A large part of this market is accounted for by bread and biscuits which are items of mass consumption. Major players in this sector, like Parle, Britannia and ITC Foods, have captured the markets to a great extent, with Britannia holding the leadership position. In terms of value, Britannia and Parle account for more than a third of the total volume of branded biscuits marketed in India.

Organized bakeries in India are utilizing social media to provide targeted and cost-effective marketing. The small local bakery cafes are eschewing traditional marketing to rely on word-of-mouth recommendations and social media engagement. Tapping into the artisanal market, smaller bakeries can concentrate on quality over quantity, while larger Indian chains such as Barista and Mad Over Donuts rely on creating larger quantities but with strong branding and associated trust.

The rising trend of “natural nutrition”, “healthy living” and “organic products” has significantly raised the consumers’ demand for whole wheat, light, natural and additive-free products. With the changing consumer preferences and health consciousness, the bakery industry is discovering new dimensions. One can have now multigrain bread, brown bread, sweet bread or even gluten-free bread of one’s choice. And it is not only loaves of bread that have become healthier. The same can be said of biscuits, cakes and pastries. Another trend that has emerged in recent years is a preference for homemade items. The pure variety of homemade chocolates that becomes available during festivals points toward the growing demand for such items in the country.

Challenges faced by the industry

The growth of this industry also brings in its own challenges and the most important of them is to expand production capacity to meet the new age demands. For example, to meet the demand for healthier food, bakery store or shop need to invest in making the facilities more hygienic and also hiring new people with knowledge of such products.

Innovating new products is another big challenge for the industry in view of increasing competition in the market. There is also a need to increase awareness about the digital technologies and convenience of social media platforms that can help bakeries in the unorganized sector reach a wider market. Currently, the organized bakery segment constitutes about 62%, whereas the rest 38% belongs to the unorganized bakery segment in the country.

With the arrival of multinational companies that are selling pizzas and burgers, consumers' tastes are also changing. Many local and international manufacturers have occupied the market, and competition is intensifying year by year. The states such as Delhi, Maharashtra, West Bengal, Karnataka, Tamil Nadu, Kerala, Andhra Pradesh and Telangana witnessed remarkable growth with the rise in local and global players.

The bakery industry has also been experiencing certain administrative challenges. The bakers have to face fluctuating government regulations, a demand-supply chain, and an increase in the price of a few raw ingredients like refined flour, the chief ingredient of almost all bakery products.

Bakery products and their HS codes

No.	HS Code	Production description
1	19053100	Sweet biscuits
2	19059090	Other bread, pastry, rice paper and similar products
3	19059040	Papad
4	19059020	Biscuits NES or included
5	19054000	Rusks toasted bread and similar toasted products
6	19053211	Coated with chocolate or containing chocolate
7	19053219	Other communion wafers
8	19059010	Pastries and cakes
9	19059030	Extruded or expanded products, savour or salted
10	19053290	Other waffles and wafers
11	19051000	Crispbread
12	19052000	Gingerbread and the like

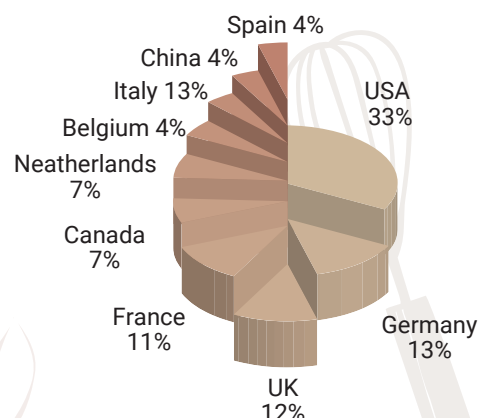


World demand and prospects(2021)

The global bakery products market reached a value of US\$ 478.4 Billion in 2021. Looking forward, IMARC Group expects the market to reach US\$ 612.4 Billion by 2027, exhibiting a CAGR of 4.0% between 2022 and 2027.

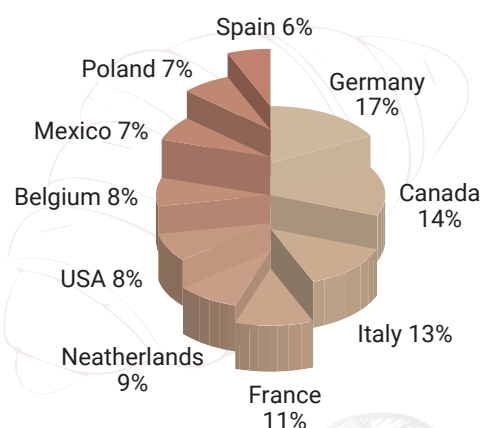
Top 10 importing countries

Country	% Share	Value USD
United States	18.58%	\$7.82B
Germany	7.15%	\$3.01B
United Kingdom	6.85%	\$2.89B
France	6.30%	\$2.65B
Canada	4.19%	\$1.79B
Netherlands	4.12%	\$1.73B
Belgium	2.53%	\$1.07B
Italy	2.51%	\$1.06B
China	2.40%	\$1.01B
Spain	2.2%	\$927.33M



Top 10 exporting countries

Country	% Share	Value USD
Germany	11.07%	\$4.59B
Canada	9.14%	\$3.78B
Italy	8.23%	\$3.41B
France	6.74%	\$2.79B
Netherlands	5.94%	\$2.46B
United States	5.23%	\$2.17B
Belgium	4.73%	\$1.96B
Mexico	4.40%	\$1.82B
Poland	4.23%	\$1.75B
Spain	3.75%	\$1.55B



Source: www.tridge.com

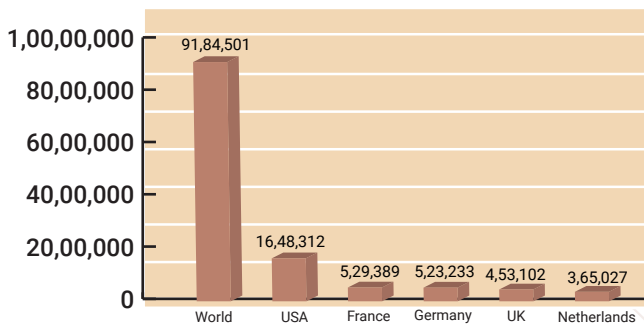
China and Brazil are rapidly growing markets for bakery products, with an approximate growth rate of 10% in the past four years. Europe currently represents the largest bakery products market. Within Europe, Germany dominates the bread and rolls segment. The United States is also a significant region in the industry, which accounts for 18% of the global bakery market share. The United States is followed by the United Kingdom, which holds 8% of the global bakery market share.

World Export and Imports

190531: Sweet biscuits.

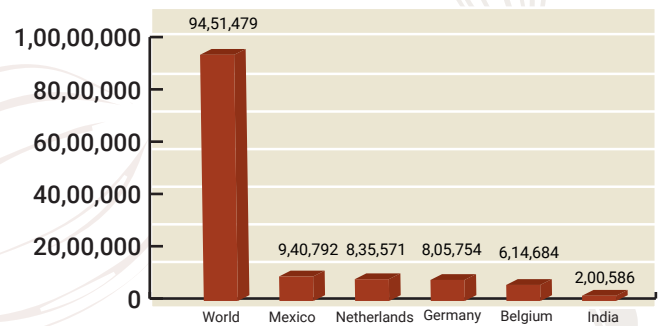
2021 Global Imports 9,184,501 USD.

No.	Country	Value USD
1.	USA	1,648,315
2.	France	529,389
3.	Germany	523,233
4.	United Kingdom	453,102
5.	Netherlands	365,027



2021 Global Exports 9,451,479 USD.

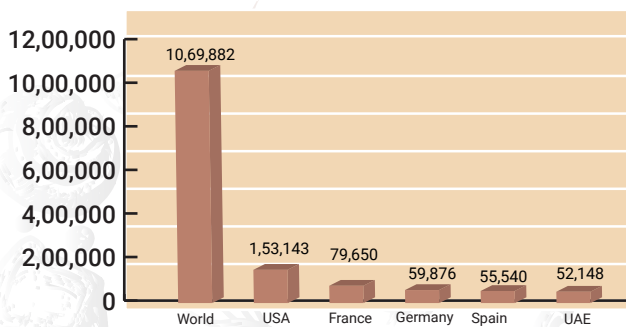
No.	Country	Value USD
1.	Mexico	940,792
2.	Netherlands	835,571
3.	Germany	805,754
4.	Belgium	614,684
15.	India	200,586



190540: Rusks, toasted bread and similar toasted products.

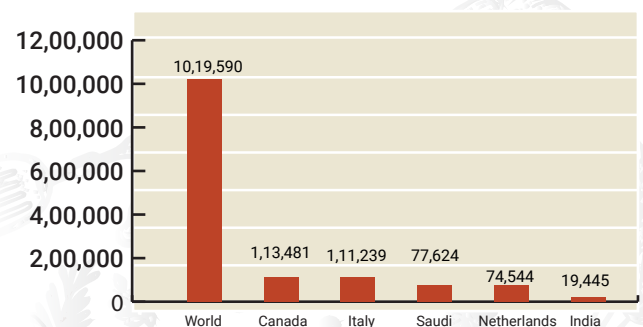
2021 Global Imports 9,184,501 USD.

No.	Country	Value USD
1.	USA	153,143
2.	France	79,650
3.	Germany	59,876
4.	Spain	55,540
5.	UAE	52,148



2021 Global Exports 9,451,479 USD.

No.	Country	Value USD
1.	Canada	113,481
2.	Italy	111,239
3.	Saudi Arabia	77,624
4.	Netherlands	74,544
20.	India	19,445



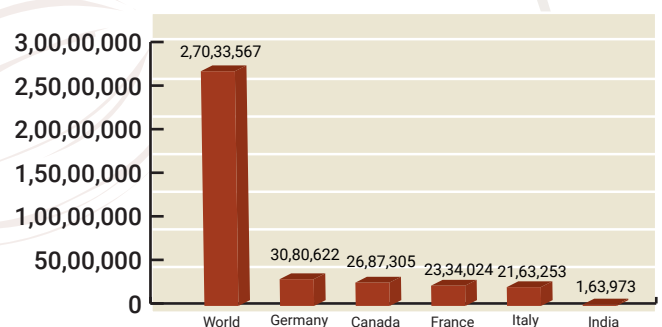
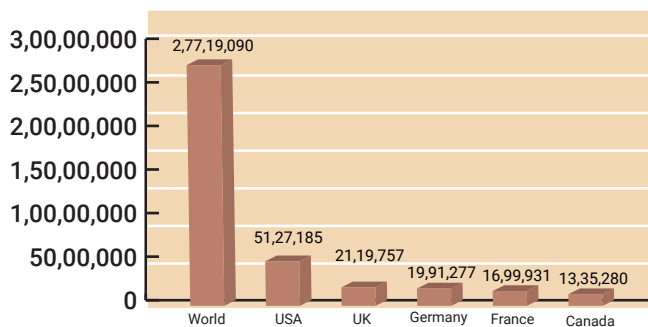
190590: Bread, pastry, cakes, biscuits and other bakers' wares, whether or not containing cocoa; communion wafers, empty cachets of a kind suitable for pharmaceutical use, sealing wafers, rice paper and similar products (excluding crispbread, gingerbread and the like, sweet biscuits, waffles, wafers not mentioned, rusks, toasted bread and similar toasted products).

2021 Global Imports 27,719,090 USD.

No.	Country	Value USD
1.	USA	5,127,185
2.	United Kingdom	2,119,757
3.	Germany	1,991,277
4.	France	1,699,931
5.	Canada	1,335,280

2021 Global Exports 27,033,567 USD.

No.	Country	Value USD
1.	Germany	3,080,622
2.	Canada	2,687,305
3.	France	2,334,024
4.	Italy	2,163,253
30.	India	163,973



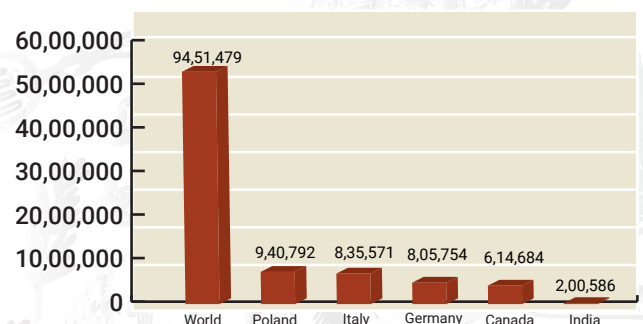
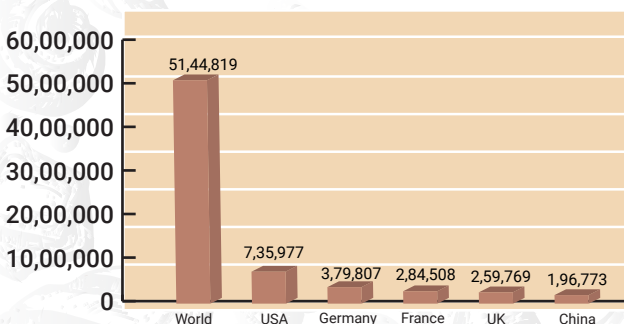
190532: Waffles and wafers.

2021 Global Imports 5,144,819 USD.

No.	Country	Value USD
1.	USA	735,977
2.	Germany	379,807
3.	France	284,508
4.	United Kingdom	259,769
5.	China	196,773

2021 Global Exports 5,352,003 USD.

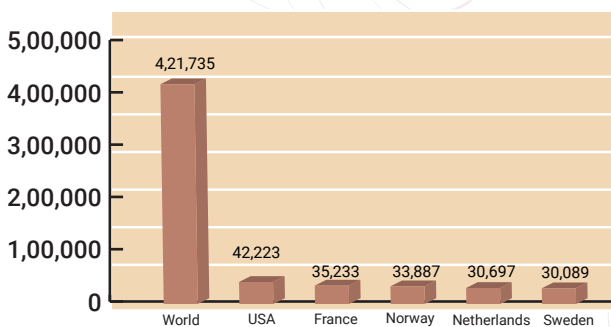
No.	Country	Value USD
1.	Poland	741,516
2.	Italy	703,227
3.	Germany	493,846
4.	Canada	425,604
29.	India	23,486



190510: Crispbread

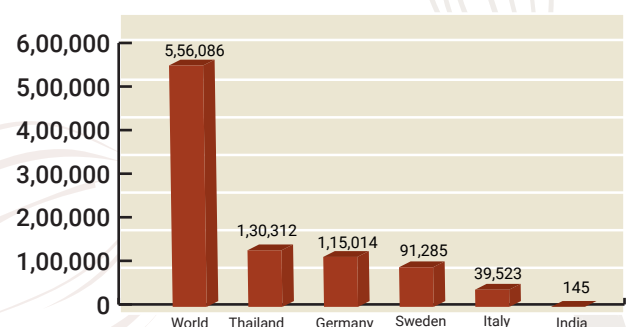
2021 Global Imports 421,735 USD.

No.	Country	Value USD
1.	USA	42,223
2.	France	35,233
3.	Norway	33,887
4.	Netherlands	30,697
5.	Sweden	30,089



2021 Global Exports 556,086 USD.

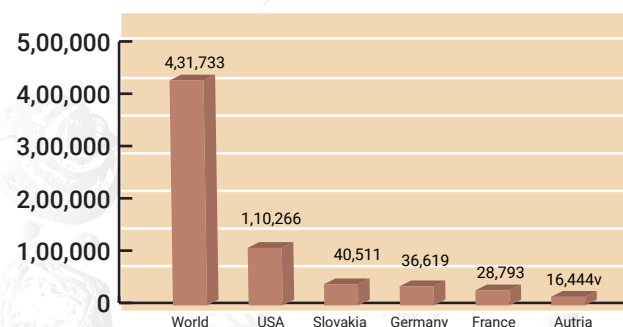
No.	Country	Value USD
1.	Thailand	130,312
2.	Germany	115,014
3.	Sweden	91,285
4.	Italy	39,523
39.	India	145



190520: Gingerbread and the like.

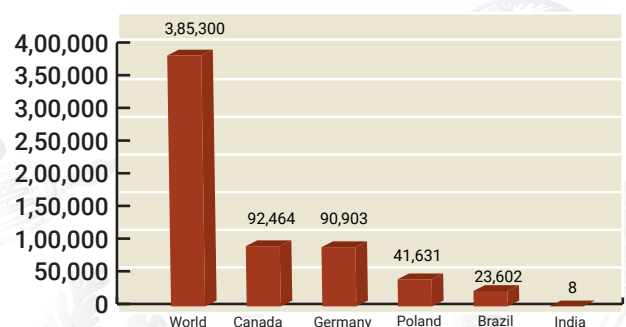
2021 Global Imports 431,733 USD.

No.	Country	Value USD
1.	USA	110,266
2.	Slovakia	40,511
3.	Germany	36,619
4.	France	28,793
5.	Austria	16,444



2021 Global Exports 385,300 USD.

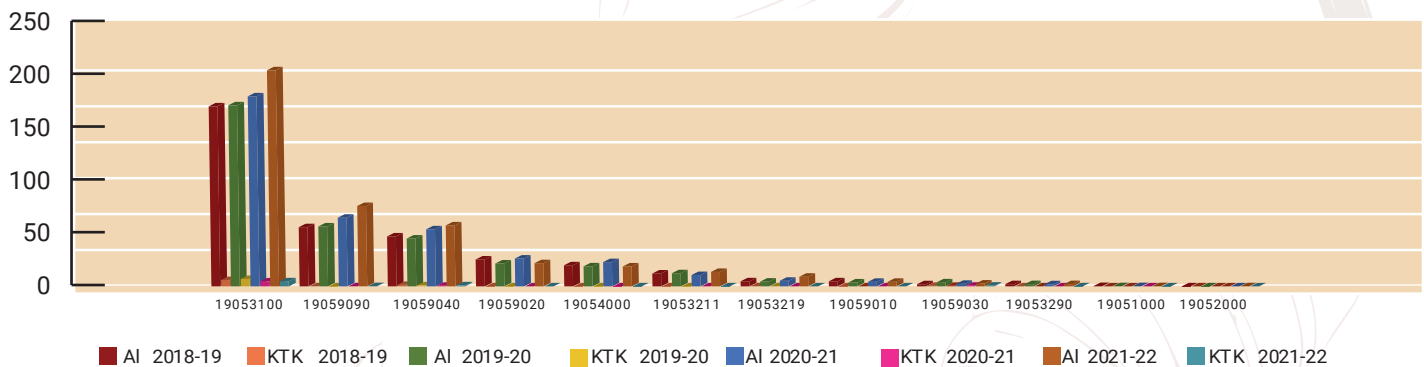
No.	Country	Value USD
1.	Canada	92,464
2.	Germany	90,903
3.	Poland	41,631
4.	Brazil	23,602
73.	India	8



Source: ITC Trade-map. Year: 2021.

Bakery products export performance for the last 4 years (Value in Mn USD)

No	HS Code	Description	2018-19		2019-20		2020-21		2021-22	
			AI	KTK	AI	KTK	AI	KTK	AI	KTK
1	19053100	Sweet biscuits	171.04	6.26	172.11	7.16	180.49	4.70	205.34	4.80
2	19059090	Other bread, pastry, rice paper and similar products	56.28	0.09	56.91	0.01	65.21	0.08	76.33	0.23
3	19059040	Papad	47.44	1.38	45.47	0.95	54.17	0.55	57.90	0.94
4	19059020	Biscuits NES or included	25.49	0.02	21.70	0.01	26.38	Nil	22.09	0.00
5	19054000	Rusks toasted bread and similar toasted products	20.23	0.03	19.02	0.06	23.04	0.02	18.92	0.02
6	19053211	Coated with chocolate or containing chocolate	12.20	0.01	12.46	0.02	10.73	0.00	13.76	0.01
7	19053219	Other communion wafers	4.83	0.10	4.50	0.08	5.29	0.00	9.16	0.00
8	19059010	Pastries and cakes	4.78	0.01	3.69	0.00	4.36	0.00	4.32	0.00
9	19059030	Extruded or expanded products, savor/salted	2.03	0.46	3.85	0.51	2.45	0.66	2.65	0.68
10	19053290	Other waffles and wafers	2.09	0.00	2.13	0.00	2.06	0.00	2.13	0.05
11	19051000	Crispbread	0.29	0.00	0.15	0.00	0.22	0.00	0.18	0.01
12	19052000	Gingerbread and the like	0.02	0.00	0.02	0.00	0.00	0.00	0.10	Nil

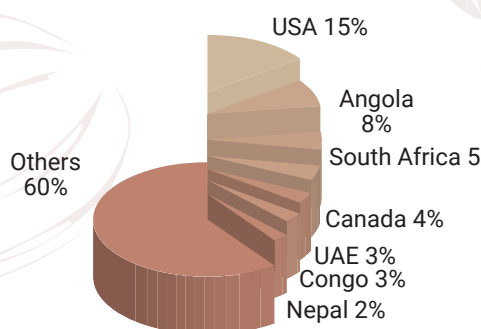
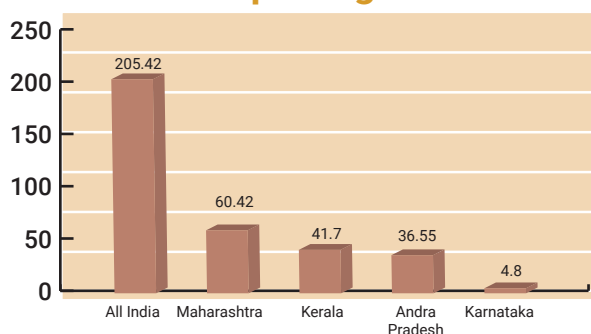


Export Analysis of Bakery products (state-wise): 2021-22

19053100: Sweet biscuits

No.	State	Value USD Mn	Destination
0	All India	205.42	USA, Angola, South Africa (140)
1.	Telangana	60.42	USA, Angola, Congo. D (+99)
2.	Gujarat	41.70	USA, Angola, Canada (+86)
3.	Maharashtra	36.55	Nigeria, Angola, Sudan (+92)
7.	Karnataka	4.80	Nepal, UAE, Australia (+26)

Exporting states

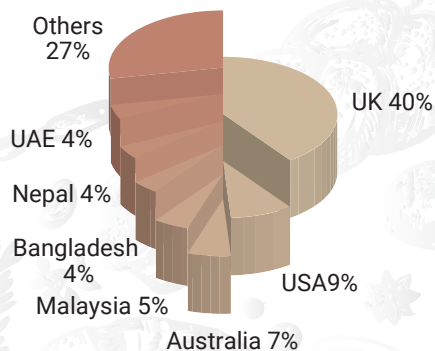
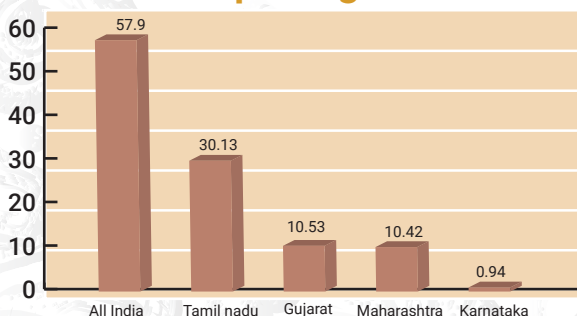


19059040: Papad

Importing Countries

No.	State	Value USD Mn	Destination
0	All India	57.90	UK, USA, Australia (+102)
1.	Tamil Nadu	30.13	UK, Malaysia, Australia (+54)
2.	Gujarat	10.53	Bangladesh, USA, Nepal (+75)
3.	Maharashtra	10.42	USA, UK, UAE (+78)
7.	Karnataka	0.94	Oman, Malaysia, Kuwait (+14)

Exporting states

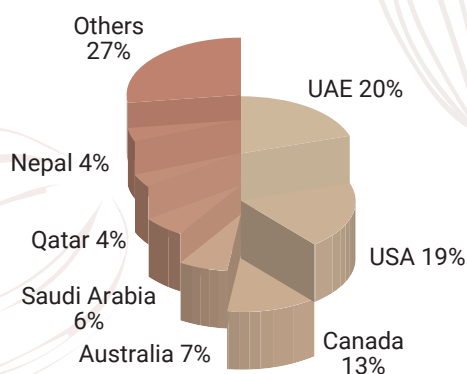
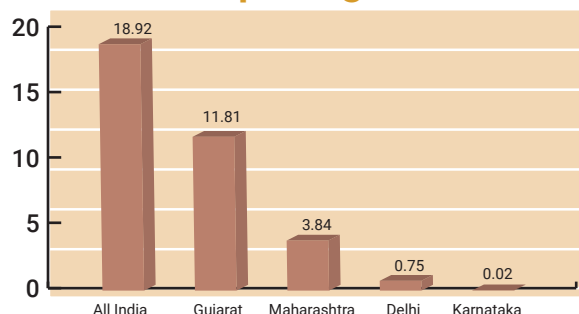


Importing Countries

19054000: Rusks toasted bread and similar toasted products

No.	State	Value USD Mn	Destination
0	All India	18.92	UAE, USA, Canada (+88)
1.	Gujarat	11.81	USA, UAE, Canada (+54)
2.	Maharashtra	3.84	UAE, USA, Canada (+69)
3.	Delhi	0.75	Canada, Australia, USA (+29)
14.	Karnataka	0.02	UAE, Kuwait, Malaysia (+3)

Exporting states

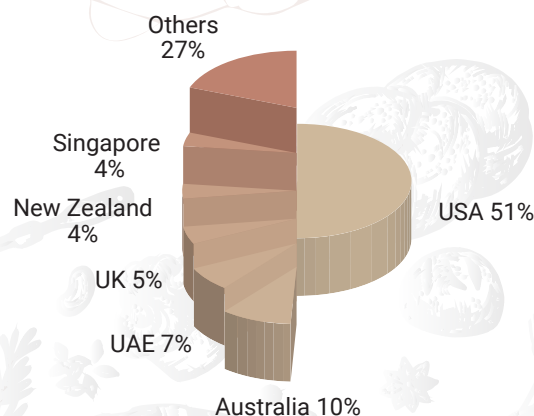
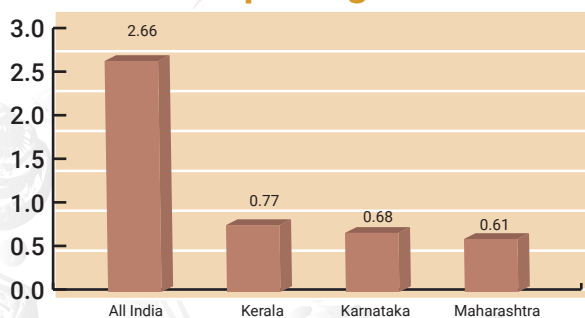


Importing Countries

19059030: Extruded or expanded products, savour/salted

No.	State	Value USD Mn	Destination
0	All India	2.66	USA, Australia, UAE (+45)
1.	Kerala	0.77	USA, Australia, New Zealand (+11)
2.	Karnataka	0.68	USA, USA, Australia, Maldives
3.	Maharashtra	0.61	USA, UK, UAE (+11)

Exporting states



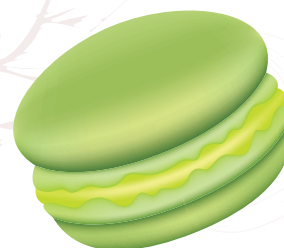
Importing Countries

Source: DGCIS and Exim Analytics

SPS and TBT measures for Bakery Products

SPS Measures usually pertain to:

- ☞ Additives in food or drink
- ☞ Contaminants in food or drink
- ☞ Poisonous substances in food or drink
- ☞ Residues of veterinary drugs or pesticides in food or drink
- ☞ Certification: food safety, animal or plant health
- ☞ Processing methods with implications for food safety
- ☞ Labeling requirements directly related to food safety
- ☞ Plant/animal quarantine
- ☞ Declaring areas free from pests or disease
- ☞ Preventing disease or pests from spreading to a country.



TBT measures typically deal with

- ☞ Labeling of food, drink and drugs
- ☞ Quality requirements for fresh food
- ☞ Packaging requirements for fresh food.



Every country has its own set of SPS - TBT measures for processed foods however bakery products of Indian origin undergo stringent FSSAI compliance and then proceed to meet international standards. Some European countries have specified levels of deoxynivalenol and zearalenone in unprocessed cereals, Cereal Flour, Bread, Pastries, Biscuits, Cereal Snacks, Breakfast Cereals, Pasta, and Processed Cereal Based Food. Nepal and USDA have restricted a few bacterial strains and enzymes in the products they import. Canada had restrictions on allergens and allergy-causing ingredients in bread and biscuits. Some countries have regulations on packaging material made out of polyvinylchloride, polyethylene, styrene polymers, polypropylene etc., Copper or brass containers which don't have properly tinned lids, aluminium containers not conforming in chemical composition to IS:20 specification for cast Aluminium & Aluminium Alloy for utensils or IS:21 specification for Wrought Aluminium and Aluminium Alloy for utensils.

Processing technologies available

- ☞ Sugar-free biscuits: <https://cftri.res.in/technologies/BP/sfb.pdf>
- ☞ Apple pomace powder for the enrichment of bakery products (bun, muffin and cookies): <https://cftri.res.in/technologies/FVP/app.pdf>
- ☞ Gluten-free (Cookies & Muffins): <https://cftri.res.in/technologies/BP/gfb.pdf>
- ☞ Honey based bakery products: <https://cftri.res.in/technologies/BP/hbp.pdf>
- ☞ Baking powder: <https://cftri.res.in/technologies/BP/cbb.pdf>
- ☞ Multigrain Bread: <https://cftri.res.in/technologies/BP/mb.pdf>
- ☞ Shelf-stable bread: <https://cftri.res.in/technologies/BP/ssb.pdf>
- ☞ Sugar-free bread: <https://cftri.res.in/technologies/BP/sfbr.pdf>
- ☞ Sugar-free cake: <https://cftri.res.in/technologies/BP/sfc.pdf>
- ☞ Sugar-free cupcake: <https://cftri.res.in/technologies/BP/sfcc.pdf>
- ☞ Sugar-free rusk: <https://cftri.res.in/technologies/BP/sfr.pdf>
- ☞ Instant cake mix: <https://cftri.res.in/technologies/BP/icm.pdf>
- ☞ High protein rusk: <https://cftri.res.in/technologies/BP/hpr.pdf>
- ☞ Onion flavoured biscuits: <https://cftri.res.in/technologies/BP/ofb.pdf>
- ☞ Composite Ragi rusk: <https://cftri.res.in/technologies/BP/crr.pdf>
- ☞ High protein biscuits: <https://cftri.res.in/technologies/BP/hpb.pdf>
- ☞ Baked Savoury Snack: <https://cftri.res.in/technologies/BP/bss.pdf>
- ☞ Chestnut based gluten-free cookies: <https://cftri.res.in/technologies/BP/cgfc.pdf>
- ☞ Nutritious Soup/breadsticks: <https://cftri.res.in/technologies/BP/nss.pdf>
- ☞ Eggless cake premix: <https://cftri.res.in/technologies/BP/elc.pdf>
- ☞ Suruchi Meetha burfi: <https://cftri.res.in/technologies/BP/smb.pdf>
- ☞ Multigrain Gluten-Free Semolina: <https://cftri.res.in/technologies/BP/mgfs.pdf>
- ☞ Shelf-stable muffins: <https://cftri.res.in/technologies/BP/ssm.pdf>
- ☞ Chocolate Pasta: <https://cftri.res.in/technologies/BP/cp.pdf>
- ☞ Multigrain Pasta: <https://cftri.res.in/technologies/BP/mp.pdf>
- ☞ Legume based Pasta: <https://cftri.res.in/technologies/BP/lbp.pdf>
- ☞ Whole wheat flour (Atta): <https://cftri.res.in/technologies/BP/poa.pdf>
- ☞ Wheat Vermicelli: <https://cftri.res.in/technologies/BP/wv.pdf>

Action plan

1. India is the second-largest producer of biscuits in the world. However, it is the world's largest biscuit consuming nation too. As a nation we need to concentrate on increasing our production.
2. Focus on quality improvement in existing bakery products of India.
3. Orientation and Facilitation must be prioritized to bridge the gap between research institutes, academia, industries and bakers to facilitate exports.
4. Educating the new and upcoming bakers to understand quality standards and tap international markets is the need of the hour.
5. Karnataka can draw knowledge and insights from thriving bakers of Gujarat, Telangana and Maharashtra to increase state exports.
6. Encourage first generation entrepreneurs and start-ups to establish themselves in Baking sector with effective hand holding. These industries can produce many other value added products which are not presently manufactured in India.
7. State and Central governments must sponsor financial schemes/ subsidies to aid capacity building in setting up of huge baking units and supporting factories and also encourage skill development in the young aspiring bakers.
8. Setting up a dedicated testing lab, either stationary or mobile reduces time lapses in exports.
9. Create awareness about the new products which have an international market and transfer knowledge about required technology through CFTRI to produce untapped value-added products.

Opportunities in Bakery and related products

1. Though Indian made biscuits, cookies, pastries and bread have a huge international market, India stands between 15 and 30 positions, in these product exports.
2. Production of various value-added products like pasta, wafers, noodles, instant mixes which are famous in other countries, provide employment to a larger group locally and also help the industries to establish themselves in exports, as there is a lot of demand in these sectors yet unexplored by Indian bakers.



Responsibility Matrix

Sl.no.	Actions	Responsibility
1.	Research on best global bakery products	CFTRI and IIFPT, Thanjavur
2.	Delegation of progressive bakers to Germany, Canada and Italy	Commerce and Industries Department, Government of Karnataka.
3.	Bakers Sensitization program on available opportunities	Commerce and Industries Department, Government of Karnataka.
4.	Inviting Exporters/entrepreneurs to Investors meet for contract farming and processing industries	Commerce and Industries Department, Government of Karnataka.
5.	Bakers database and aggregation of the produce	Commerce and Industries Department, Government of Karnataka.
6.	Processing technology and Value Addition Handholding	CFTRI, Mysuru and MSME
7.	Export training, orientation and Market Intelligence	VTPC Karnataka

Regulators and Service providers

No.	Organization	Service	Contact
1.	APEDA	RCMC, Market survey and assistance.	1st Floor, Beeja Bhavan, Bellary Rd, Hebbal, Bengaluru - 560024. E: apedabl@apeda.gov.in
2.	KAPPEC	PMFME Scheme	17, Richmond Rd, Shanthala Nagar, Richmond Town, Bengaluru - 560025. E: kappec1996@gmail.com
3.	DGFT	IEC, Customs and ICEGATE	6th floor, Kendriya Sadan, C & E Wing, 17th main, Koramangala 2nd Block, Koramangala, Bengaluru - 560034 E: bangalore-dgft@nic.in
4.	Plant Quarantine	Phyto Sanitary certification (SPS)	Hebbal-Boopasandra Road HA Farm Post, Bengaluru - 560024. E: dd-pqfsb-ka@nic.in
5.	BIAL Cool Port	Freight and Flight	KIAL Road, Devanahalli, Bengaluru -560300 W: http://www.aisats.in