

October 2021

# 2021 Industry Report: Salt



# Executive Summary

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## Production

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- Salt production in China has fallen by an average of 2% year on year since 2014, but the country has still consistently been ranked as the world's largest producer of salt since 2019.
  - In 2021, a shortage of salt in India is expected due to the excessive rainfall experienced over the past two years and the effects of COVID-19 that have severely impacted salt production in Gujarat, a major salt production state in India.
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## Exports

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- Global salt exports reduced to 63.2M tons in 2020, a 15% dip from 2019, when 74.7M tons were shipped globally.
  - The EU suffered the most in 2020, followed by North America and Asia, as exports were reduced by -3.5M tons, -3.3M tons and -2.2M tons, respectively.
  - The global salts and flavoured salts market is forecast to grow at a CAGR of 5.2% during the period 2018-2023.
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## Recent Developments

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- The demand for salt has been growing globally due to globalization and the high influence of westernization in the emerging countries driving the growth of foreign cuisines such as Italian and French food, which calls for specialized flavors and seasonings.
- There is also a growing trend of consumers preferring organic flavoured salts manufactured using natural ingredients.
- Consumers are becoming more aware of the harmful effects of fast food and sodium reduction ingredients are the major restraint in the salt industry.

Worldwide Exports of HS Code: 2501 Salts, incl. Table salt and denatured salt, and pure sodium chloride, whether or not in aqueous solution of containing added anti-caking or free-flowing agents; sea water

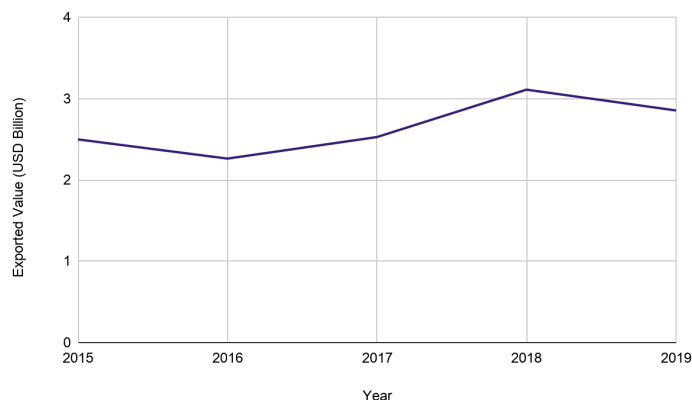


Chart 1. Source: ITC Trade Map

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Part I

# Product Information

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1.1 Product Types

1.2 Production Methods

1.3 Factors determining Prices of Salt

# Salt Product Information

Salt is a product of the evaporation of seawater (40% of global production), inland brine (35%), mining of rock salt and brine solutions (25%). although global production annually is fluctuating.

The biggest consumers of salt are the chemical industries, and among these industries, the chlor-aklali and synthetic soda ash industries consume the most salt for production. Other important uses of salt are for de-icing and for consumption. The 4 industries make up 75% of salt consumption and the remaining 25% is consumed in markets such as animal feeds, water treatment and other industrial applications.

## Product Types

### Dietary Salt Types

The salt market is segmented based on the industry be it industrial/ chemical or consumption based. Some of the dietary salts that are economically significant are as follow:

Type	Description
Table Salt	A type of salt mined from underground deposits and is further processed to remove minerals with a relatively high iodine content.
Butter Salt	A type of flavoured salt, with the combined flavor of salt and butter popular in the fast food industry.
Garlic Salt	A flavoured mix of salt containing table salt and garlic powder is also a popular flavoring condiment.
Onion Salt	A flavoured mix of salt containing table salt and finely ground dehydrated onion.
Celery Salt	A flavoured mix of salt containing table salt and ground celery seed or the seeds of lovage.
Truffle Salt	A mixture of table salt and black or white pieces of truffle, which is a type of fungus.
Smoked Salt	Sea salt flakes infused with smoke from real, untreated wood.
Sea salt	Produced by evaporating ocean water or water from saltwater lakes, the type of salt that went through minimal processing and is often merely pure or with minimal traces of other chemicals such as calcium.

Type	Description
Himalayan Black Salt (Kala Namak)	A reddish-brown salt created by cooking rock salt with charcoal, herbs, seeds, and bark in a furnace for 24 hours. It has a very distinctive flavor and smell—often described as soft-boiled egg-like—and is commonly used in vegan recipes to mimic the taste of eggs.
Pickling Salt	This salt is especially created for pickling purposes. Coarse and contains no iodine, minerals, or caking agent and dissolves easily in brine..
Black Hawaiian Salt	Made by adding activated charcoal to sea salt, black Hawaiian salt is known for its strong flavor—often described as "earthy."
Red Hawaiian Salt	Red Hawaiian salt is sea salt that is mixed with iron oxide-rich volcanic clay. Its flavor is described as nutty. Its striking red color makes it ideal for garnishing finished dishes.
Flake Salt	Is a form of table salt compressed to create the flattened flake appearing in crystallized, light, thin, and irregularly shaped (often like pyramids), flake salt has a very bright taste and low mineral content.
Fleur de Sel	Harvested from evaporated sea water, specifically from the coast of Brittany, West France. Characterized by the strong smell and sea taste. It has a higher moisture content than regular salt (10%) allowing the salt crystals to stick together. It's best used as a finishing salt.
Celtic Grey Sea Salt	Harvested from Atlantic tidal ponds off the coast of France, Celtic sea salt is also known as sel gris (French for "gray salt"). Its gray color comes from the minerals that are left behind when the sea water evaporates. Use as a finishing salt on roasted vegetables or grilled meat or seafood.
Himalayan Pink Salt	Himalayan pink salt is harvested from the Khewra Salt Mine in the Himalayan Mountains of Pakistan. Easily recognizable because of its pink color. It is one of the most easily recognizable salt and has application in cooking and in the aesthetic industry.
Kosher Salt	Its texture is light but coarse and highly abrasive, often sold in its pure form of simply sodium chloride. It is mainly used just for cooking purposes.
Curing Salt	<p>Curing salts, also known as pink salt or Prague powder, are made up of a mixture of table salt combined with sodium nitrate and a distinctive pink dye.</p> <p>They are mainly used to preserve meat by inhibiting the growth of bacteria that leads to spoilage. Curing salts usage dates back to centuries, way before the advent of refrigeration and modern food processing and preservation techniques.</p>

Type	Description
Sale di Cervia	Sale di Cervia is the Italian version of the French fleur de sel. Sale di Cervia lacks the brininess of the fleur de sel and is an excellent choice as a finishing salt for all cuisines.
Cyprus Black Lava Salt	<p>This black salt is similar in composition and benefits with the Hawaiian black salt.</p> <p>Produced from the waters of the Mediterranean Sea, the salt is then combined with activated carbon for its distinctive black color, with a hint of a smoky flavor. This salt has a more distinct pyramid flake shape than the Hawaiian one and is crunchier.</p>
Rock Salt	Large, chunky, non-uniform crystals. Minerals and other harmless impurities can give it a grayish color.

Chart 2. Source: Sugar.org

## Production Methods

Name	Description
Solar Evaporation	<p>Capturing salt by evaporating seawater in natural lagoons or artificially created ponds, salt marshes or marine salt flats. Basically the seawater is left to dry out under the sun leaving behind salt crystals. Currently, crystallisation occurs in dedicated open basins where the saturated brine is poured. Once the salt crust has been formed, the exceeding water is eliminated before harvest. If necessary and depending upon requirements, the raw salt can be further processed, including washing, drying, sifting and grading.</p> <p>Solar salt represents 10% of the salt produced in Europe and the main producers are located in France, Greece, Italy and Spain.</p>
Rock Mined Salt	<p>Rock salt (halite) is the salt left behind by ancient oceans millions of years ago when they eventually dried out. These layers of salt were covered by rock formations and they are now located underground or inside mountains. Rock salt refers to the dry salt extracted from saliferous rock layers with the help of mining methods.</p> <p>Most salt mines operate underground but in salt deserts the rock salt is also mined at the surface.</p> <p>Salts are usually obtained through cut and blast mining. A series of carefully sited holes are drilled and then charged with explosives to blast the rock. The resulting salt rocks are then repeatedly crushed into pieces.</p> <p>Rock salt represents 30% of the salt produced in Europe and the main producers are located in Germany and the United Kingdom.</p>



Chart 3. Source: EU Salt

Name	Description
Solution Mined Salt	<p>The salt used in this process is extracted from the rock salt layer at depths of as much as 400 meters by pumping down water and forcing out the resulting brine.</p> <p>Yields a very pure salt which can be excellent for chemical applications.</p> <p>Solution mined salt represents 60% of the salt produced in Europe and the main producers are located in Germany, the Netherlands, the United Kingdom, Poland and Switzerland.</p>

## Factors determining Prices of Salt

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Salt prices vary depending on the method of extraction, country of origin, process used to refine or add additives, grade, application, demand etc.

- Salts produced from brine or evaporated from seawater usually have the lowest price since they have minimal mining and processing cost compared to vacuum evaporated salt which is very expensive, reflecting the cost of extracting and processing pure salt.
- Salts sold in bulk have lower value compared to salt processed, packaged, palletized or block-pressed.
- Among the salts-type based on the industry, food grade salts have the highest value among the salts as it entails more specific processes and packaging, chemical grade salts are less expensive while salts used for defrosting roads are the cheapest. Pharmaceutical grade salts are the most expensive as the source (vacuum evaporate salt) and the additional processing needed to develop the salt is highly specific.



## Part II

# Global Market Dynamics

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2.1 Global Production, Consumption and Export Trends

2.2 Major Salt Producers.

- China
- United States
- India
- Europe

# Global Market Dynamics

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## Global Production, Consumption and Export Trends

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The demand for food grade salts has been growing as a result of globalization driving the growth and popularity of foreign cuisines such as Italian and French food, which calls for specialized flavors and seasonings. Then there is also the increasing trend for a healthier diet and consumers are becoming more aware of the potential harmful effects of fast food diets with their high salt content, hence, the amount of salt ingredient reduction is a major restraint in the salt industry.

Global salt exports reduced to 63.2M tons in 2020, a 15% dip from 2019, when 74.7M tons were shipped globally. Despite the global reduction in exports, the salt industry was resilient despite the prevalence of COVID-19 pandemic on international trade. Among the exporters of salt, the EU had the biggest drop of -3.5M tons followed by North America - 3.3M tons and Asia - 2.2M tons.

The global salts and flavoured salts market is forecast to grow at a CAGR of 5.2% during the period 2018-2023. Despite the apparent trend of reduced sodium consumption, global salt consumption has been growing at an annual rate of 1.9%.

Worldwide salt markets like most industries that utilize salts were affected by the logistics restrictions as a result of the COVID-19 pandemic, along with the shutting down of many small businesses especially in the food sector. The lockdown impositions also led to temporary or major shut down of fine dining restaurants especially in Europe since the most affected countries in Europe were France and Italy. The consumption of salt has seen low volumes. Moreover, even before the pandemic, the trend towards a healthier diet has affected the salt industry as high sodium contents especially of fast foods has seen consumption levels at their lowest. There is also the shift from a regular diet to vegetarianism which has resulted in the reduced consumption of meat and poultry products especially in the Asia Pacific region.

### Export Trends

Consumption in the graph is a function of the total production volume + export volume - imported volumes (tons)

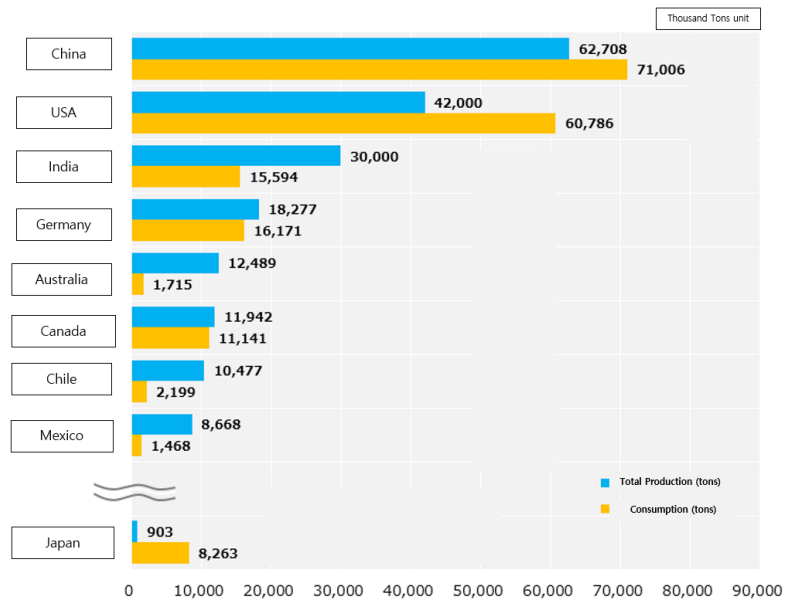


Chart 4. Source: Salt Industry Center of Japan (2019)

## Major Producer's Salt Market

### China

China remains the largest producer and consumer of salt worldwide. The Chinese salt market is expected to grow at a CAGR of 4.5% from 2020-2027. Although salt production in China has fallen by an average of 2% YoY since 2014, the country is still consistently ranked as the world's highest producer of salt since 2019 relative to other producing countries.

Total exports in 2020 reached 1.158M tons for a value of USD 98,588 with South Korea and Japan as the largest importer.

Salt production in China from 2009 - 2019

### United States

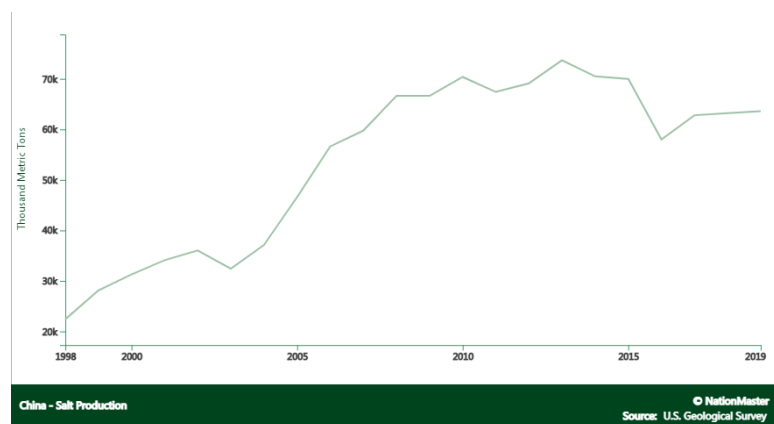


Table salt in the US is largely used in the production of processed foods sold in grocery stores and used in the F&B industry. The remainder, less than 20%, is utilised by domestic individual households. Despite the increased intake of salt over the long term in the country, in the short term, demand from consumers and food processors has remained relatively steady from year-to-year without too many fluctuations. Recently, health experts have aggressively warned consumers on the dangers of a diet high in salt. But till date, the impact on industry revenue has been negligible compared to other countries. The US is currently the second largest salt producer in the world, increasing at an average of 1.2% per year between 2016 and 2021. The market size is valued at USD 512.4M in 2021 and forecasted to remain steady in the remainder of 2021. The US is the 2nd leading salt exporter in the world with USD 214,890K at 1.26M tons exported worldwide in 2020. The US's major export destination is Canada (1.12M tons)

### North America Gourmet Salt Market Segmentation

The use of salt or gourmet salt in the North American F&B industry is the highest and most diverse in terms of the varieties of salt used, classified by application and by type of salt usage. 35% of the total market share of gourmet sale is represented by Fleur De Sel. The demand is influenced by the product's application on salads, grilled meats and vegetable dishes. Fleur De Sel is also used as a bakery product for seasoning caramel, bread and chocolate, which adds an exotic hint of flavour, high mineral content, better solubility and moisture.

Another significant salt variety is the Sel Gris. The Sel de Gris is expected to increase its market share by over 8% until 2025. Sel Gris is mainly used in culinary and decorative food products and what sets it apart from other salt varieties is that it does not dehydrate food items such as meat and vegetables, and leaves most of the composition of the products (ie. fluids intact) unlike ordinary table salt, making it preferable for a healthier food option.

By application, the North American Gourmet Salt Market can be divided into bakery and confectionery, meats and food preservation, sauces and flavours. Meat and poultry processing applications are expected to exceed USD 500 million by 2024. The rise in meat processing and the preservation of canned meats is set to propel the growth of the North American gourmet salt market. The fastest growing applications are baking and confectionery, at an average annual growth rate of over 8.5% by 2024.

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## India

India is the third largest producer of salt in the world. However, for MY 21/22, a shortage of salt in the country is expected due to the accumulated effects of excessive rainfall experienced over the past two years and the effects of COVID-19 that have severely impacted salt production in Gujarat, a major salt production state in India. As a result, salt production was delayed and commenced in December-January 2020 instead of the usual September start date. Furthermore, the lockdown imposed due to the outbreak of COVID-19 halted production leading to a 35% decrease in output in 2020 compared to 2019. The limited production means that there will be limited salt reserves in the country, leading to scarcity of the product by September-October 2021.

While COVID-19 has made it difficult for farmers to produce during the peak season from March to April, manufacturers have been fairly able to keep their operations running, anticipating insufficiency during the off-season.

The volume of salt that can be harvested from the salt pans is strongly dependent on weather conditions. Insufficient sunshine or excessive rain affects production quantity. Indian salt exporters have had an opportunity to increase their salt exports in 2017 when Thailand was hit by a cyclone and heavy rainfall in 2017, filling in for the gap caused by the shortage. Exports subsequently increased in 2018 and 2019, up to 12.8 million tons (December 2018 data).

Thai salt production has since recovered, despite the factors that are causing lower salt production volumes, Indian production and exports are expected to grow strong. The high salinity of Indian salt means that a pinch or small quantities are enough for flavoring, making the product largely popular in the international market.

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EU sugar production for MY 2020/21 is forecast at 16M MT which is about 1M MT below MY 2019/20 and 2M MT below MY 2018/19. The European Union is the top producer of sugar beets, occupying approximately 50% of global production. In the past year, yields have fallen due to three extended droughts in a row which incurred severe damages from the

## Europe

### Netherlands

The Netherlands is the world's top exporter of salt by value, with annual salt production figures in excess of 7M tons of rock salt and a quarter of a million for magnesium salt. The country also manufactures sea salt, iodized salt and Himalayan salt for export purposes. Countries such as Germany, Belgium, France, Finland, Portugal and other EU countries are top destinations for Netherlands salt products.

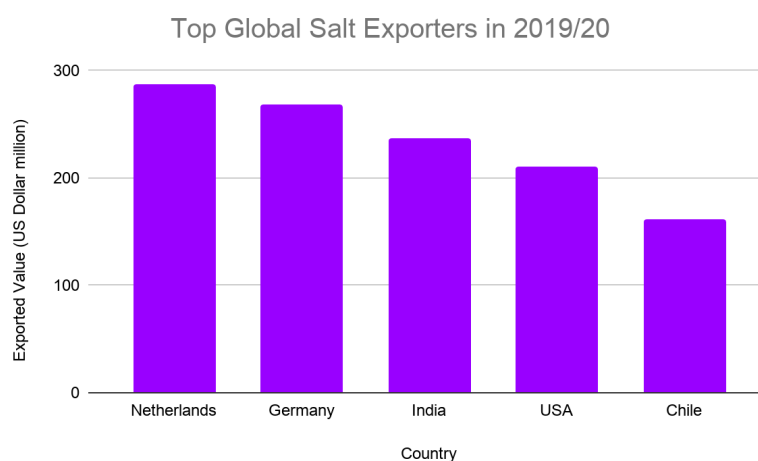


Chart 5. Source: ITC Trade Map

### European Salt Market Analysis

Geographically the European gourmet or food-grade salt market is segmented into UK, France, Spain, Germany, Italy, Russia, Sweden, Denmark, Switzerland, Netherlands, Turkey, Czech Republic and the rest of Europe. In 2019, Germany overtook the Netherlands and the UK, accounting for more than 35% of the total salts produced within the EU .

By type, the market is divided into flake salt, special salt, gray sea salt, fleur de sel, himalayan salt etc. Fleur De Sel is popularly used in salads, vegetable dishes and grilled meats due to the exotic flat flavor. The development of demand by expert chefs is set to propel the growth of the Fleur De Sel.

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