

# MARKET OVERVIEW

Commodity Trading

*Sugar*



Rebecca GUILLEMENOT – Yosra CHAHIN

10/02/2020 – ROBERT PILLIER

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# A GENERAL PRESENTATION OF THE COMMODITY

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Sugar is made up through a natural process, which is called photosynthesis. In fact, this process turns sunlight into energy. Thanks to this process, it allows to obtain sucrose. The amount of sucrose in nature is substantial and we can find it in sugar cane or sugar beet. Furthermore, ethanol, which is a biofuel, could be made by sugarcane. Therefore, sugar serves not only to give a taste to our food but also to allow the engine to work.

## Historical dimension

Sugar or white gold as it was called in the 16th century by British colonist, was in the heart of slave trade. Millions of Africans have been brought in America in order to work in the sugar plantation. The benefits of the sugar trade were so substantial that it helped America to be independent from Great Britain.

## Market structure

We can find the production of either cane or beet sugar in more than 110 countries. The global sugar production is based on the sugar cane production which counts for roughly 80% on average, thanks to the tropical and subtropical climates. The remaining 20% of the production is made by the sugar beet in mostly temperate zones. In 2018/2019 the world's production was around 179 million metric tons.

If we focus on the 10 top countries that produce sugar, we can find:

- Brazil
- India
- Thailand
- China
- The US
- Mexico
- Russia
- Pakistan
- France
- Australia

Since years, Brazil is the world's biggest sugar producer. The one of the biggest sugar producer company in Brazil is "Cosan Brazil LTDA" which is a member of the Brazilian Sugarcane Industry Association (UNICA). Companies that are member of this association produce more than 50 % of ethanol and 60% of sugar in Brazil.

India produced around 29 million metric tons of sugar. It represents roughly 20% of the total world's production. Moreover, there is an increase in sugar farmland. Despite the increased number of farmlands, the country is expecting to see a drop in the production by roughly 26% because of weather conditions as the droughts and floods which have damaged the crops.

As previously said, Brazil is the biggest sugar producer, which produced 29,5 million metric tons of sugar. Poor conditions, like droughts and low prices, impacted the sugar harvest. It is important to highlight that most of Brazilian engine are ethanol based, so it allows a certain demand of sugar.

Furthermore, due to dry weather in Europe, the sugar production has been also affected. However, an exceptional harvest in Russia is expected to lead to an oversupply. In general terms, the current production seems to be quite close to the one of the last decades.

### Key players

The sugar industry is composed of different companies. Some of them are located in the US: Fajul Corp, Imperial Sugar, and US Sugar. Other are in Brazil like Copersucar. Finally, there are companies based in EU like Südzucker (DE), Royal Cosun (NL) and Tereos (FR).

## THE TRADE FLOWS INVOLVED

### Areas suitable for planting

Sugar is one of the so-called "soft" agricultural raw materials and is very sensitive to climate change. Sugar cane production is mainly concentrated in countries with a tropical and subtropical climate because it needs a lot of sunshine, frost-free conditions and abundant rainfall during the growing season. In the other side, sugar beet needs more temperate weather. As we can see in the figure n°2, north countries produce sugar beet whereas sugar cane is essentially produced in the south countries

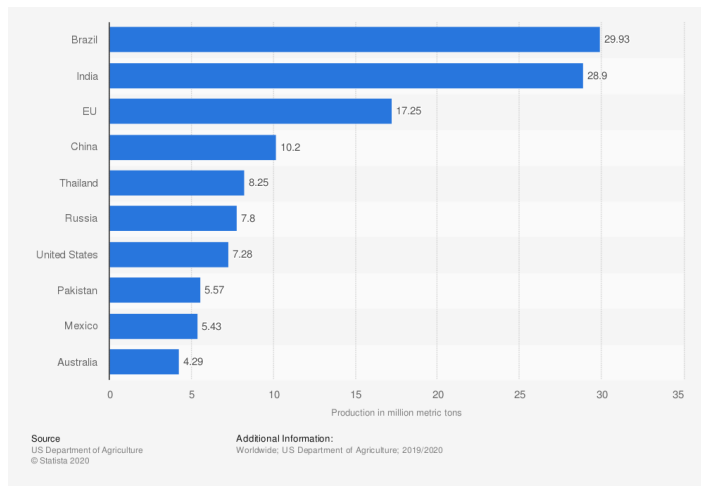


Figure 1 : Sugar production worldwide in 2019/2020, by leading country (in million metric tons)

<https://www.statista.com/statistics/495973/sugar-production-worldwide/>

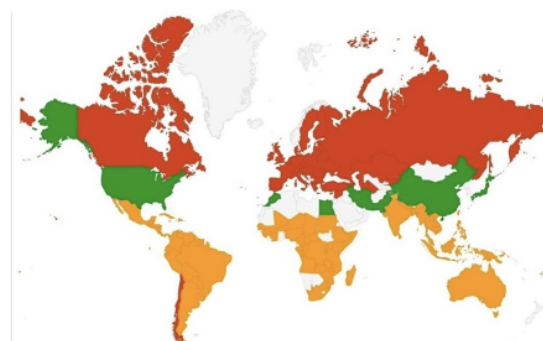


Figure 2 : These countries represent 70% of the total production of the last season.

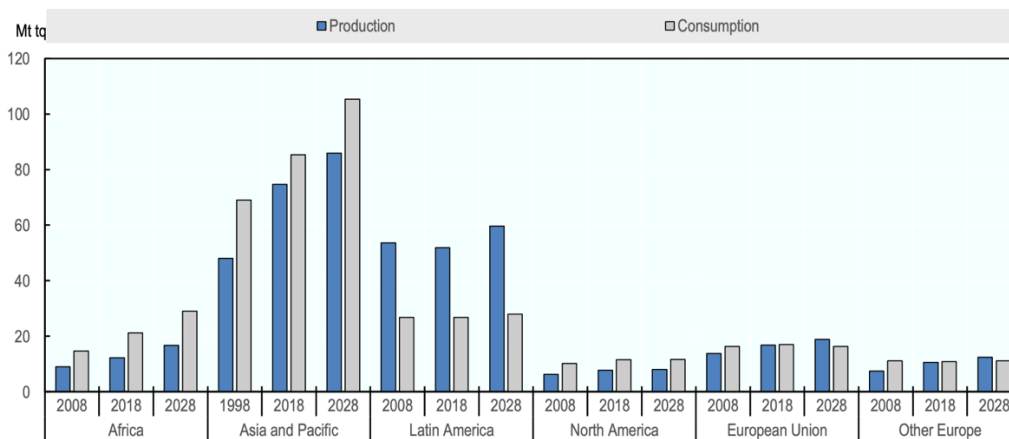
<http://www.isosugar.org/sugarsector/cane-and-beet>

all around the world. There are few countries that produce both sugar variety due to their special climate.

## Consumption

India consume around 27 Mt sugar in 2019/2020<sup>1</sup>. It is more than 15% of the worldwide sugar consumption which represents around 172 million Mt<sup>2</sup>. That is why it makes this country by far the biggest sugar consumer. The European Union and China come after with around 18 and 15 Mt<sup>3</sup> respectively.

Sugar consumption is expected to grow. This growth is going to come mainly from developing countries in Africa, Asia and Latin America. Conversely, in developed countries the consumption is going to slow down, because of the changes in habits.



Note: data are expressed on a tel quel basis (tq)

Source: OECD/FAO (2019), "OECD-FAO Agricultural Outlook", OECD Agriculture statistics (database), <http://dx.doi.org/10.1787/agr-outl-data-en>.


StatLink  <http://dx.doi.org/10.1787/888933958600>

Figure 3 : Supply and demand of sugar by region

[https://www.oecd-ilibrary.org/docserver/agr\\_outlook-2019-en.pdf?expires=1601471572&id=id&accname=guest&checksum=B0BCE668AD9C4204644D4A27B61FE2B8](https://www.oecd-ilibrary.org/docserver/agr_outlook-2019-en.pdf?expires=1601471572&id=id&accname=guest&checksum=B0BCE668AD9C4204644D4A27B61FE2B8)

## Packaging and technical aspects

The transport of sugar must be done by a trustworthy logistics company. The transport is important because if it is not done correctly it will lead to a substantial amount of sugar damage. Indeed, this commodity is very sensitive in which environment it is transported and also stored. Here are the following elements which influence the quality of the sugar. First of all, we have humidity. Humidity should be between 55% and 65%. If it exceeds 75%, it will lead to fermentation and mold production. On the other hand, if humidity is less than 50% the grains of sugar will harden. Another element that

<sup>1</sup> <https://www.statista.com/statistics/496002/sugar-consumption-worldwide/>

<sup>2</sup> <https://www.statista.com/statistics/249681/total-consumption-of-sugar-worldwide/>

<sup>3</sup> <https://www.statista.com/statistics/496002/sugar-consumption-worldwide/>

should be under control is the temperature, between -25 degrees and +25 degrees. In order to control the changes in temperature, there is ventilation that helps to normalize the temperature. Sugar is stocked in silos.

All along the years, the transport has been improved and changed. The transport depends on several typologies regarding the material either plastic or jute and the shape, like bags. This configuration allows to transport around 25 to 100kg. This is more common for white sugar. However, it is more common to transport raw sugar in bulk through containers, this ensures the security of the product on contrary to other packaging. Then it can be done either by ship, railway or road.

## **ITS SPECIFICATIONS**

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The sugar trade is not only for the food market. Sugar is present today much more than we think. Indeed, it is even used to produce many other products. For example, when power costs are high and we are looking for an alternative, we can use bagasse to create electricity. Sugar, in another form and after certain processes, can be used as fuel or even to create plastics or textiles.

## **A DESCRIPTION OF THE PRICE**

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Almost a century ago, the representatives of the sugar industry joined the traders in the futures and options markets. In 1914, the Coffee Exchange of the City of New York added the trading of sugar futures. The large volumes seen earlier attest to the global importance of the sugar futures and options markets. Their future prices are indicated in the different trading platforms as CME (Chicago Mercantile Exchange) and ICE (Intercontinental Exchange).

The price of sugar is set up by the marketplace (supply and demand). There are several factors that come into play that influence the market price of sugar. Among the most important are currency fluctuations, government funding (subsidies), weather conditions, health concerns, and ethanol demand.

### **Currency fluctuations**

The U.S. dollar is the currency used in most financial transactions. Similarly, the vast majority of commodities are fixed in US dollars (USD). This is the case for sugar. This implies that fluctuations in this currency will have an impact on its international price. A weak U.S. dollar generally means that commodity prices fall, and demand rises. If the dollar strengthens against other currencies, sugar becomes more expensive and demand decreases.

However, one must also be careful with a second currency. Brazil is the world's largest producer and exporter of sugar, so fluctuations in its currency, the Brazilian real, directly affect the price of sugar. When Brazil's local currency is weak, farmers produce more sugar and export it to countries with greater purchasing power. Conversely, when their currency is strong, farmers favor the local market to obtain reals and thus increase their purchasing power.

## **Government funding**

A lot of countries conduct a policy of compulsory stocks for important goods in case of shortage and to ensure smooth supply during potential crisis. Even the Swiss Government does stockpiling for various goods such as grain, coffee and sugar etc.

The primary goal of stockpiling of sugar to guarantee the supply of basic nutrition during shocks, has been overlapped over time by the protection of the income of local farmers by guaranteeing a minimum price. This is the case - for instance - in USA and in Switzerland where the citizens consume on average 3 to 4 times more than recommended by WHO.

It is therefore evident that the government funding not serves anymore as a precautionary measure during turbulent times, but are indirect subsidies for the sugar industry by guaranteeing a minimal price and even going further with a minimum border protection levying CHF 2 to CHF 7 per 100 kg in order to protect the local sugar industry from cheap imports, which costs for example the swiss tax payer around CHF 33 millions per year.

The policy of protecting the sugar industry is clearly a policy of misguiding the markets at the cost of the consumers. This can even lead to misallocation of resources for the industry ranging from soft-drink producers to nutrition makers such as Kraft and Nestlé with the consequence that such companies will shift their production in countries with lower sugar prices. In such a case sugar subsidy that protect farmers can even lead to the decay of higher qualified jobs in the nutrition industry.

## **Weather conditions**

As previously said, the harvest depends on the weather. In fact, a drought in Brazil, for example, can damage sugar cane and slow down the production cycle. Conversely, too wet weather is also not ideal for sugar production. As seen above, sugar canes need a dry atmosphere. Therefore, bad weather conditions in these producing countries can lead to malfunctions in the production cycle. The supply of sugar is therefore impacted downwards.

## **Health concerns**

Appreciated by many of us, sugar is present just about everywhere in food. This sweet and pleasant tasting substance has an energetic role for human beings beyond the simple desire to give a sweet taste to food. However, a diet too rich in sugar can have consequences on health. Numerous studies have shown that sugar promotes many other diseases in addition to diabetes and obesity.

In addition, in recent years there has been a new trend towards a healthy diet with a low sugar content. These two reasons could lead to a decrease in the consumption and demand for sugar in the future.

## Ethanol demand

Sugar is not only used for food. It can also be considered a source of energy. By growing sugar-containing plants (beet or cane), fuel can be produced. Indeed, with a very specific fermentation process, sugar becomes a biofuel called "bioethanol".

Used as an alternative to fossil fuels, ethanol is a competitor to gasoline as a fuel source. The price of sugar is then linked to the price of oil. For example, if the price of gasoline falls and its demand increases, then the demand for sugar for ethanol decreases. Conversely, if the price of gasoline rises and its demand falls, then the demand for sugar for ethanol increases.

## COST CURVES

Cost production in sugar industry will face pressure. In fact, it will be different for different in each region. As one of the important elements is labour. Indeed, in India it represents almost 60% of the total cost (see figure below). It raises questions, like sugar harvesting can maybe be fully mechanically equipped in order to maximize yields

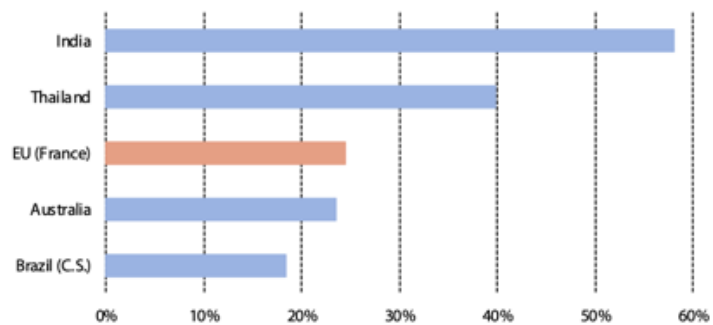
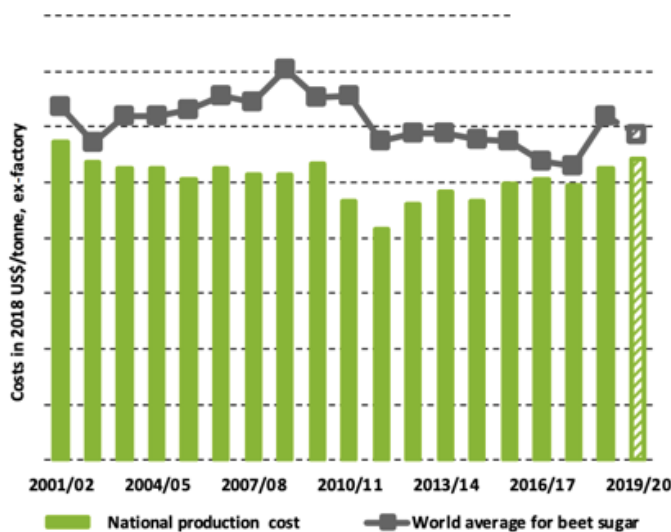


Figure 4 : Labour as a % of total costs

<https://www.lmc.co.uk/wp-content/uploads/2019/02/LMC-Sugar-Production-Costs-Forecasts-1.pdf>



World cost average production for beet sugar tend to decrease. Indeed, we can explain this drop because of the COVID -19 situation.

Figure 5 : LMC beet sugar production costs – USA

<https://www.lmc.co.uk/wp-content/uploads/2019/02/LMC-SugCoP-Brochure-2020-1.pdf>



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