Quarterly
CROP REPORTS

Brazilian Black Pepper

Juliano Camara

COREIMEX
BROKING SPICES AND NUTS

Summary

1. Brazilian Pepper Crop Overview
2. Brazilian Production
    - 2.1. Production Numbers
    - 2.2. Production by State
    - 2.3. Production Area
    - 2.4. Successes and Challenges
        - 2.4.1. Currency devaluation
        - 2.4.2. Given he high demand
        - 2.4.3. Rising prices internationally
        - 2.4.4.Governmental Support.
        - 2.4.5. Sustainability and Organic Farming
3. Weather Patterns
    - 3.1. Drought in Brazilian Pepper Planted Regions?
    - 3.2. Clime Events
    - 3.3. Crop Impacts
4. Local Consumption
5. Brazilian Exports in Numbers
    - 5.1. Yearly Quantity Exports in MT: 2004 - June 2021
    - 5.2. Yearly Exports by Main States in MT: 2018 - 2021
    - 5.3. Yearly Exports to the Major Importing Countries in MT: 2018 - June 2021
    - 5.4. Yearly Average Price in US$/KG FOB: 2004 - June 2021
    - 5.5. Yearly Value in MM US$/FOB: 2004 - June 2021
    - 5.6. Monthly Quantity Exports in MT X Monthly Average Price: August 2015 - June 2021
    - 5.7. Monthly Average Price in US$/MT FOB: August 2015 - June 2021
6. Market Forces that act on the most important fundamentals of the trade
7. Logistic Disruption and Covid-19 Pandemic Status
8. Stock Overview
9. Brazilian Pepper Prices Outlook - Monthly Average Price in US$/MT FOB: Jan 2004 - June 2021

1. Brazilian Pepper Crop Overview

- The Brazilian Crop has been redesigned in the last 5 years. In the past the major producing region used to be Pará state, well known as Belém origin pepper.

- Today Espírito Santo state, well known as Vitoria pepper has become the major producing region by almost half of what Pará is producing nowadays.

- The other promising and new rising region is Bahia state.

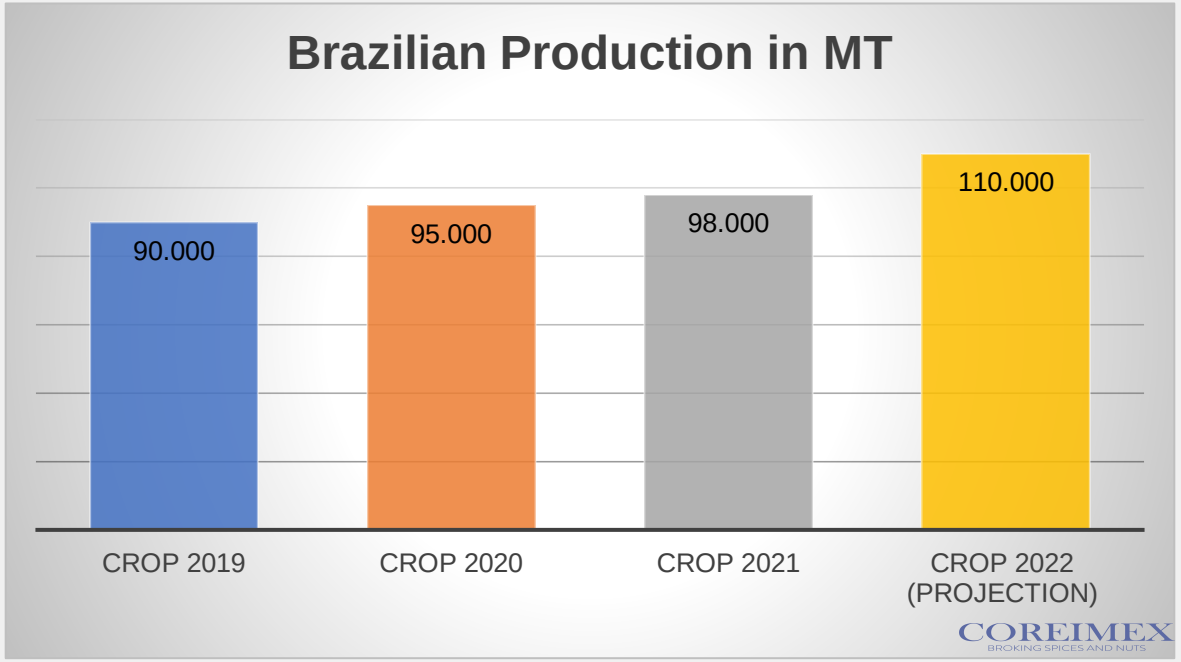
CROP PERIODS	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEP	OCT	NOV	DEC
Pará								■	■	■		
Espírito Santo / Bahia	■	■			■	■					■	■

Note: In Espírito Santo and Bahia states, these are the peak producing months, however the pepper is being harvested through all the year.

2. Brazilian Production

2.1. Production Numbers

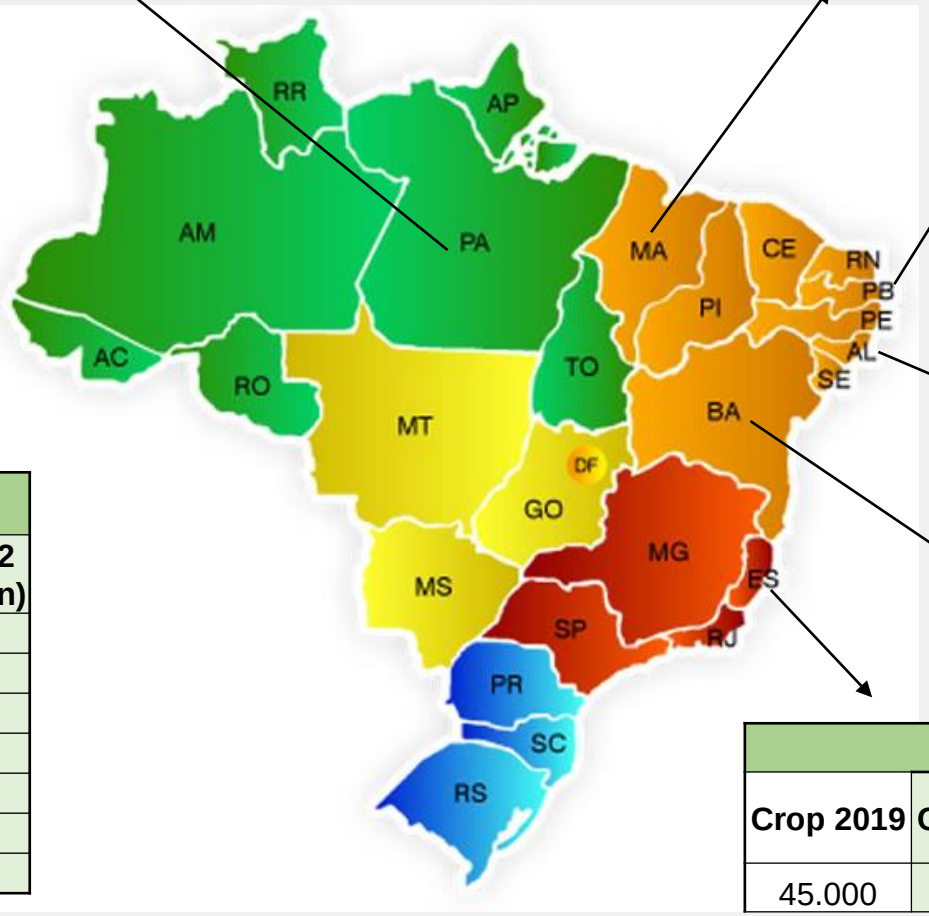
Brazilian Production (MT)			
Crop 2019	**Crop 2020**	**Crop 2021**	**Crop 2022 (Projection)**
90.000	95.000	98.000	110.000



2.2. Production by State

Production (MT)			
Crop 2019	Crop 2020	Crop 2021	Crop 2022 (Projection)
39.000	31.000	32.000	34.000

Production (MT)			
Crop 2019	Crop 2020	Crop 2021	Crop 2022 (Projection)
20	25	30	33



Production (MT)			
Crop 2019	Crop 2020	Crop 2021	Crop 2022 (Projection)
50	55	60	62

Production (MT)			
Crop 2019	Crop 2020	Crop 2021	Crop 2022 (Projection)
700	725	710	700

Production (MT)			
Crop 2019	Crop 2020	Crop 2021	Crop 2022 (Projection)
5.000	8.000	9.000	13.000

Production (MT)			
Crop 2019	Crop 2020	Crop 2021	Crop 2022 (Projection)
45.000	55.000	56.000	62.000

	Production (MT)			
	Crop 2019	Crop 2020	Crop 2021	Crop 2022 (Projection)
Pará	39.000	31.000	32.000	34.000
Espírito Santo	45.000	55.000	56.000	62.000
Bahia	5.000	8.000	9.000	13.000
Alagoas	700	725	710	700
Paraíba	50	55	60	62
Maranhão	20	25	30	33
Others	230	195	200	205

2.3. Production Area

It is estimated that Brazilian Pepper Cultivated and Harvested area are between 30.000 to 40.000 HA.

Pepper plantation in Espírito Santo with 8 months old.

2.4.1. Currency devaluation.

Since January 2020 Brazil has seen a strong devaluation of its currency Reais (R$), which contributed to the rising pepper prices locally.

A) From January 2020 to June 2021 the devaluation of the Brazilian currency against the American dollar (US$) was by 21,23%.

B)To refer this currency volatility in this last 18 months, were seen months with devaluation such as:

October 2020: 35,42%.
November 2020: 30,60%
March 2021: 35,90%
April 2021: 33,98%

2.4.2. Given the high demand for Brazilian pepper and strong competition between exporters, the exchange rate advantage were used to acquire raw material from farmers.

A) From January 2020 to June 2021 the raw material price in Brazilian Reais (R$) has rosed by 200%.

2.4.3. Rising prices internationally.

A) Based on Monthly average price. From January 2020 to June 2021 the price internationally (US$) has rosed by 71,27%.

B) If we consider the lowest price in 2020 to the maximum price in 2021 there is an increase of 138,89% on the prices.

➢ The consequences of it was better returns to farmers and it created an environment of extra incentive to plant more than the usual yearly replanting in the last 13 months. The rose price in Brazilian Reais (R$) from January 2020 to June 2020 was 66,67% .

2.4.4.Governmental Support.

The Federal Government, through the Ministry of Agriculture, see the pepper as a very important culture, not in terms of revenue compared to other larger agriculture commodities which is produced in Brazil, but because it is one of the most important in terms hold back the rural exodus. There are an enormous number of farmers and families who depends on pepper culture to generate income in these regions, while other cultures involves much less people. For the perspective of the Federal Government pepper is a key product in the areas it is grown.

A) EMBRAPA and EMATER are Research and Development Governmental Institution available to the pepper sector.

2.4.5. Sustainability and Organic Farming

A) Customers demand for sustainable pepper has made a few Brazil farmers and exporters to look for international certifications.

B) Environmentally friendly practice are growing fast in Brazil. Such as the usage of living support on the pepper vines instead of wood stakes. Several producers are abolishing the use of wood dryers that emit smoke into the atmosphere, instead they are building green houses to do the same work. It has been seen very often the correct use of natural resources, such as water.

C) Organic pepper farming is a reality in Brazil.

2.4. Successes and Challenges

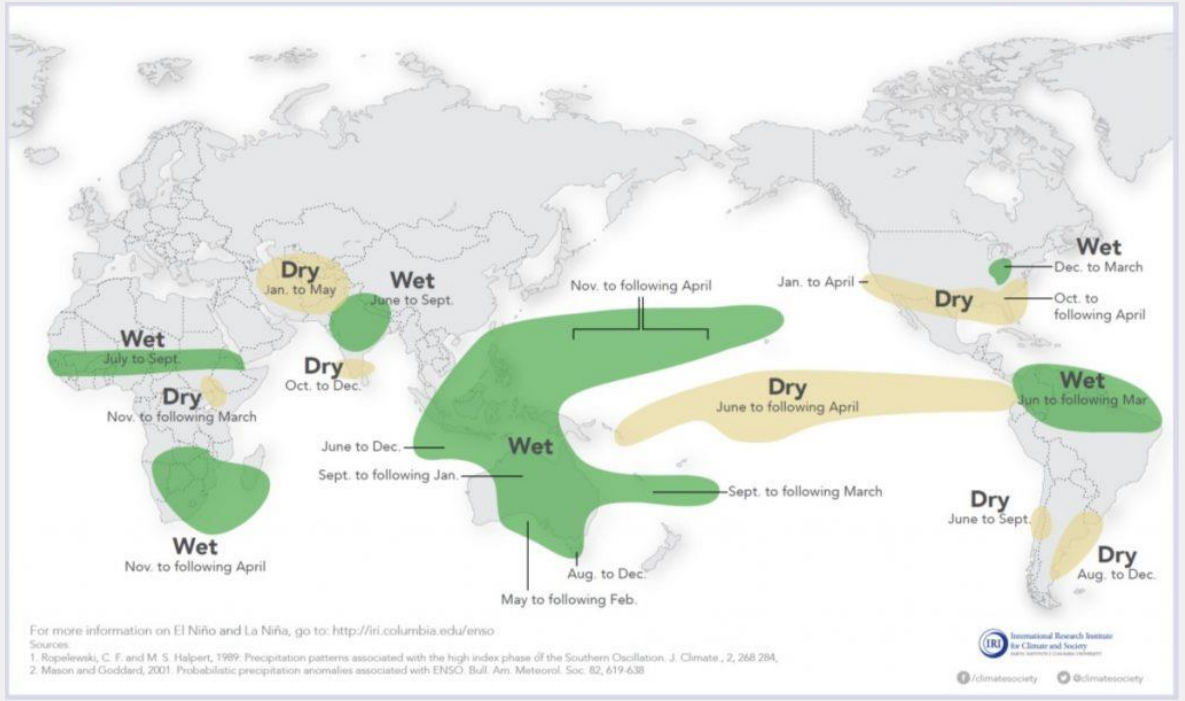
D) Sustainable Farming: In the photos, you may see the usage of living support in the pepper vines. The plant is called *Gliricidia sepium* and has been widely disseminated for the sustainable cultivation of pepper in Brazil. Currently, there is a Public-Private Partnership (PPP's) working to obtain qualitative and quantitative knowledge in pepper production. After the cycle of studies are completed, the knowledge will be further disseminated among farmers in Brazil. As one example of this knowledge, is the cataloging of sustainable benefits in the use of living support over the conventional wood stake support. *Gliricidia sepium* is a leguminous tree that fixes nitrogen naturally in the soil, which can prolong pepper's life expectancy and bring welfare improvements for growers during harvest period. Its leaves serves as fodder for animals. The PPP's is seen in the state of Pará among Exporter, Embrapa, Emater, Federal and State Universities.

3. Weather Patterns

3.1. Drought in Brazilian Pepper Producing Regions?

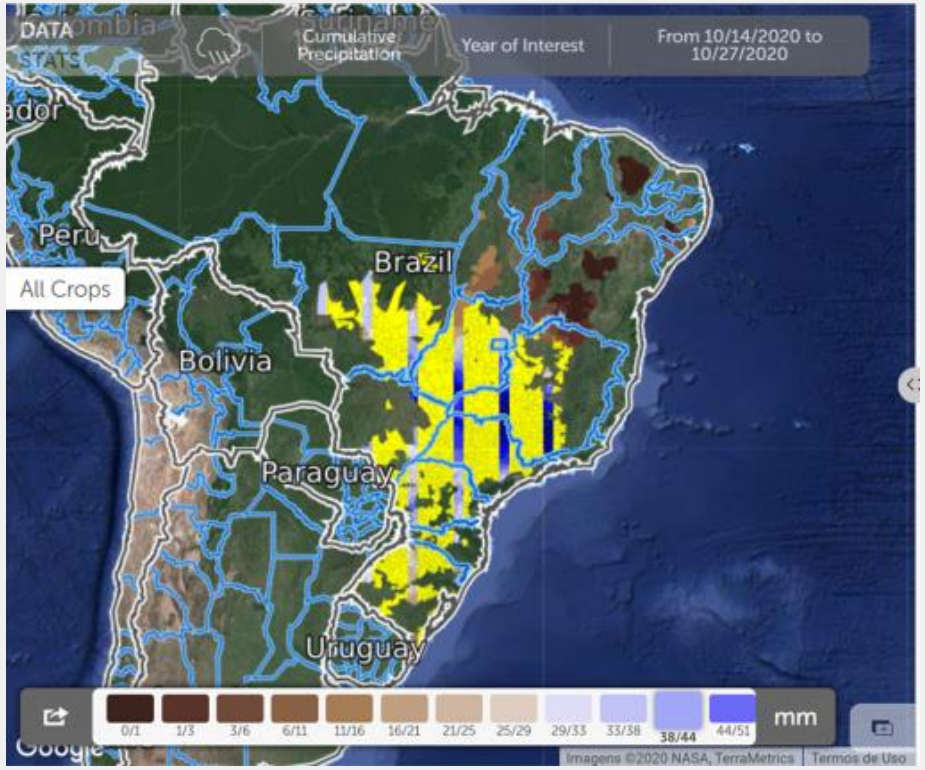
➢ During the second half of 2020 we have seen several news and crop reports stating that La Niña weather pattern would affect Brazilian crops in general, including Pepper. No doubt this is a very serious scenario for crops harvested in the regions that this weather patterns are occurring. If persists for much longer there may be concerns in nearby regions where these phenomenon occurs.

➢ It is important to clarify that La Niña effects in Brazil are characterized by droughted period in the Southern regions and more rains in the Northern and Northeastern regions.



3.2. Clime Events

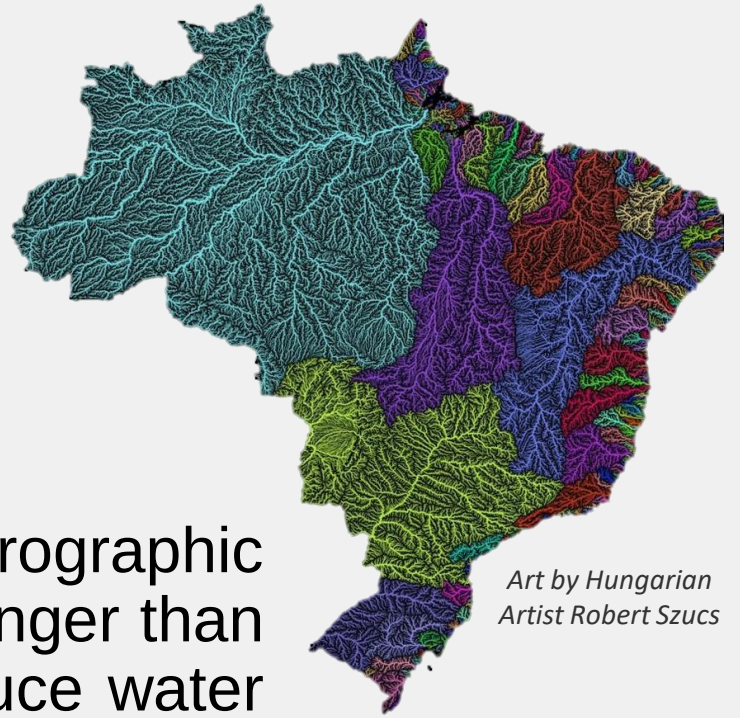
- National Geographic says: *La Niña events are also associated with rainier-than-normal conditions are over southeastern Africa and northern Brazil.*
  - https://www.nationalgeographic.org/encyclopedia/la-nina/



https://www.urthecast.com/la-nina-2020-trends-and-impacts/

- La Niña usually leads to increased rainfall in North Eastern Brazil, Colombia and other northern parts of South America and is associated with rainfall deficiency in Uruguay and parts of Argentina.
  - https://www.unocha.org/themes/el-ni%C3%B1o/el-ni%C3%B1o-and-la-ni%C3%B1a (United Nations Office for the Coordination of Humanitarian Affairs)

3.3. Crop Impacts



Art by Hungarian Artist Robert Szucs

- From 2020, up to July 2021, there has been no reports of drought impacts on pepper producing regions. In fact, earlier rains in Northern regions have anticipated Pará crop by about 1 month earlier. Raining season started in November 2020 when usually starts in January 2021.
- Due to the extensive connectivity of the Brazilian hydrographic basin, the concern shall be if the drought period persists longer than expected in the Central and Southern regions, it may reduce water reserves in Espírito Santo and Bahia states, which are mostly planted with irrigation system.
- Weather events tend to follow patterns, however there may be variations from season to season. Therefore, constant monitoring is necessary in order to verify whether there will be negative or beneficial impacts on the plantations.

4. Local Consumption

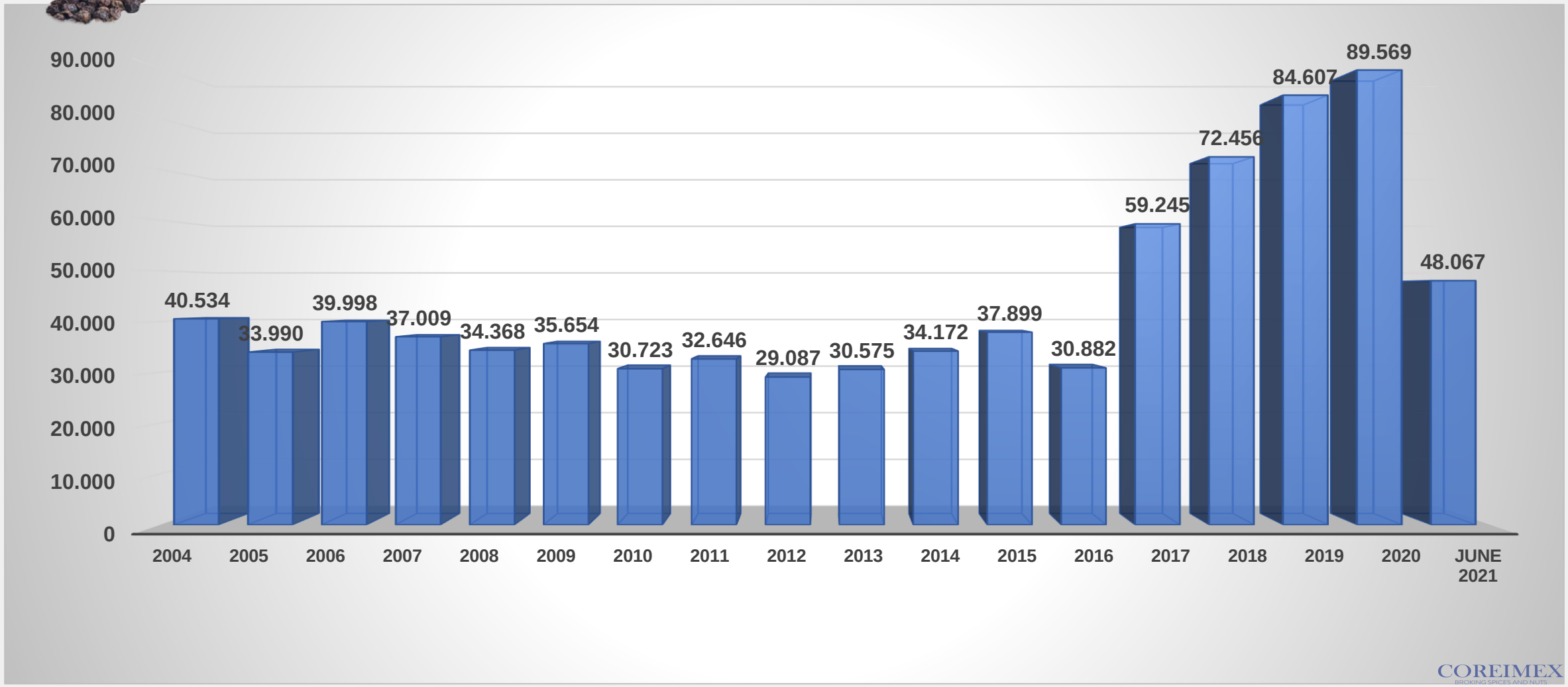
- The Brazilian local consumption is steadily increasing over the years. A precise number is quite difficult to be determined.
- Local consumption is estimated to be around 8.000 MT to 9.000 MT.
- The major processors and industries are located in the Southeastern part of Brazil, therefore they concentrate their procurement in Espírito Santo and Bahia states due to logistics cost advantage.

Facts that support these numbers are:

- ✓ Increasing purchase power by Brazilians lower and middle classes in the last 10 years.
- ✓ Changes in eating habits. Some examples:
  - (a) Increase of meat consumption and readymade seasoned products/meals available in the supermarket chains.
  - (b) More people are eating outside instead of coming to their houses during weekdays due to traffic in the main centers.
  - (c) There are much more local and international fast-food chains available.

5. Brazilian Exports in Numbers

5.1. Yearly Quantity Exports in MT: 2004 - June 2021



5.2. Yearly Exports by Main States in MT: 2018 - 2021

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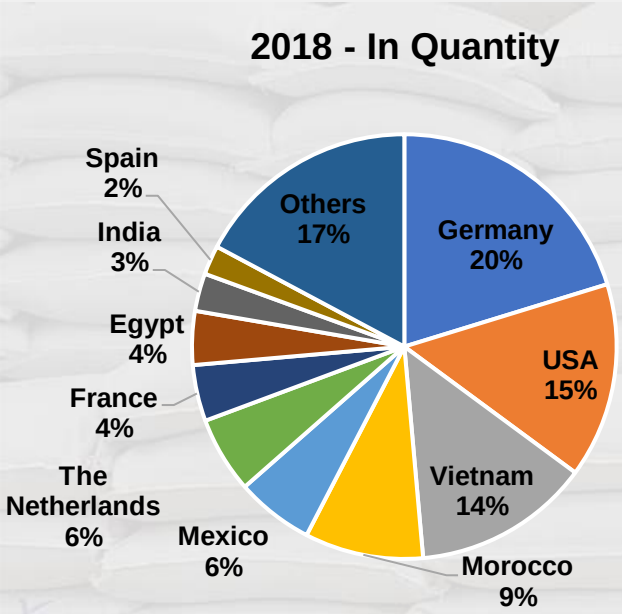
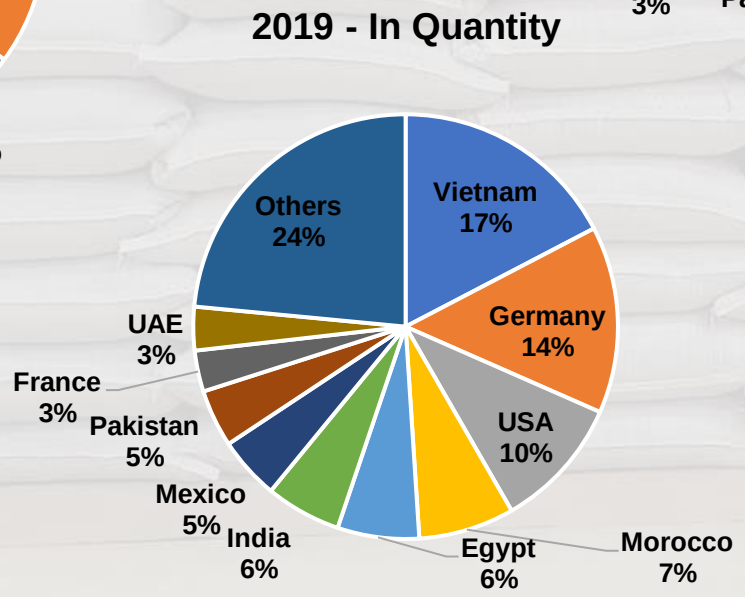
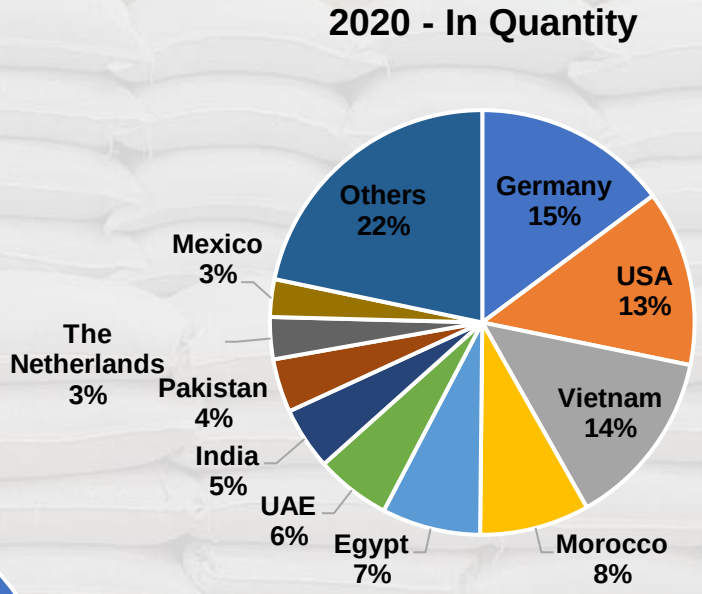
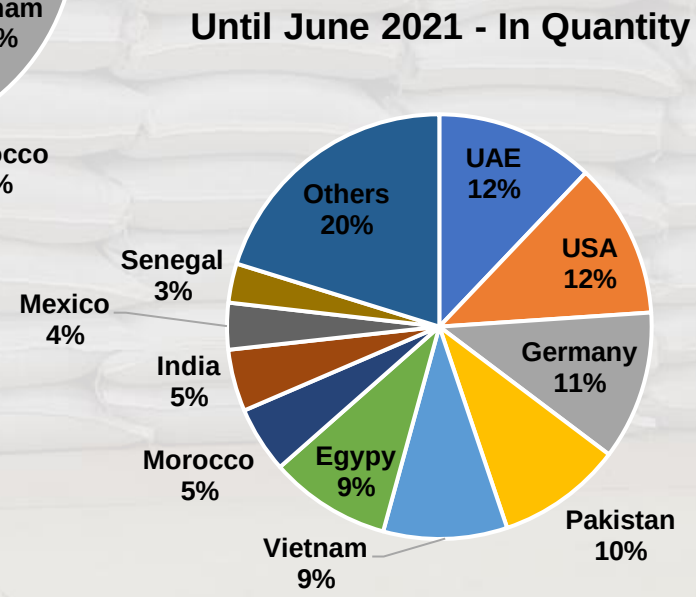
5.3. Yearly Exports to the Major Importing Countries in MT: 2018 - June 2021

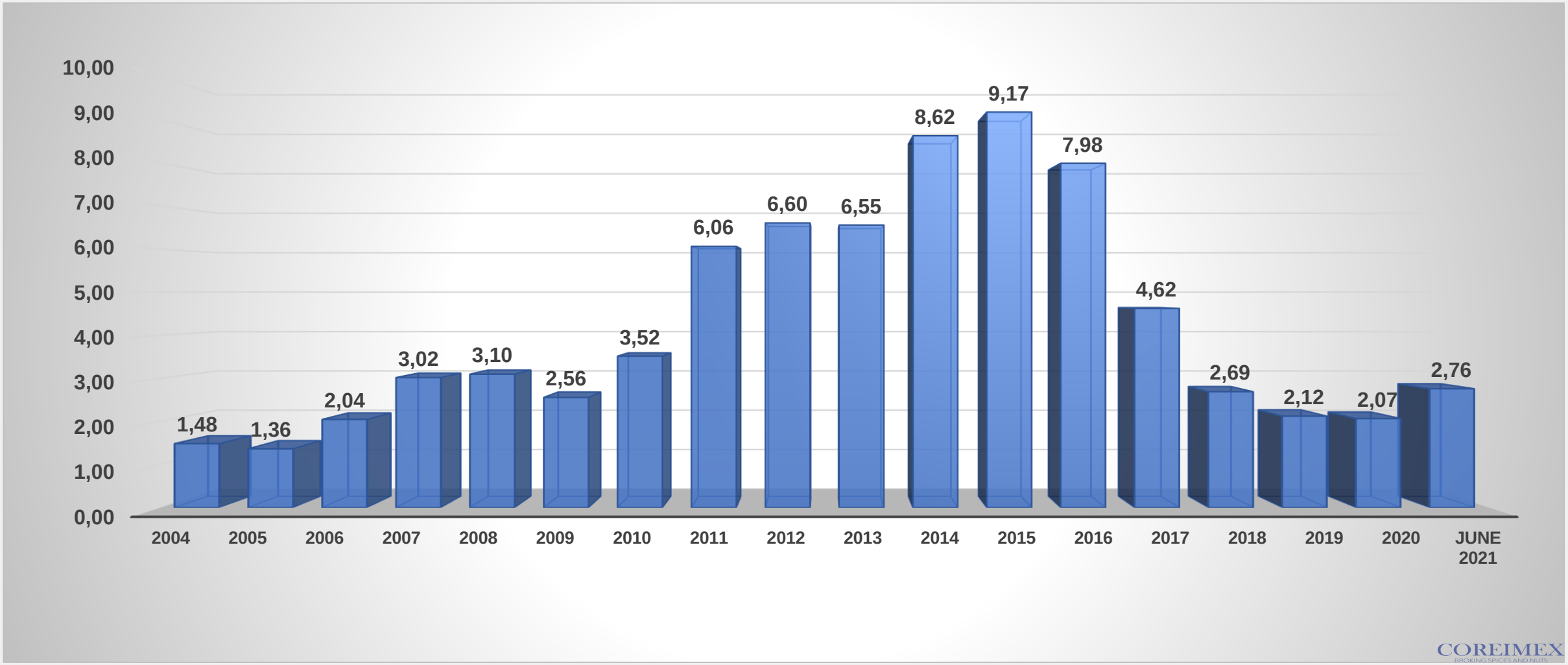








5.4. Yearly Average Price in US$/KG FOB: 2004 - June 2021



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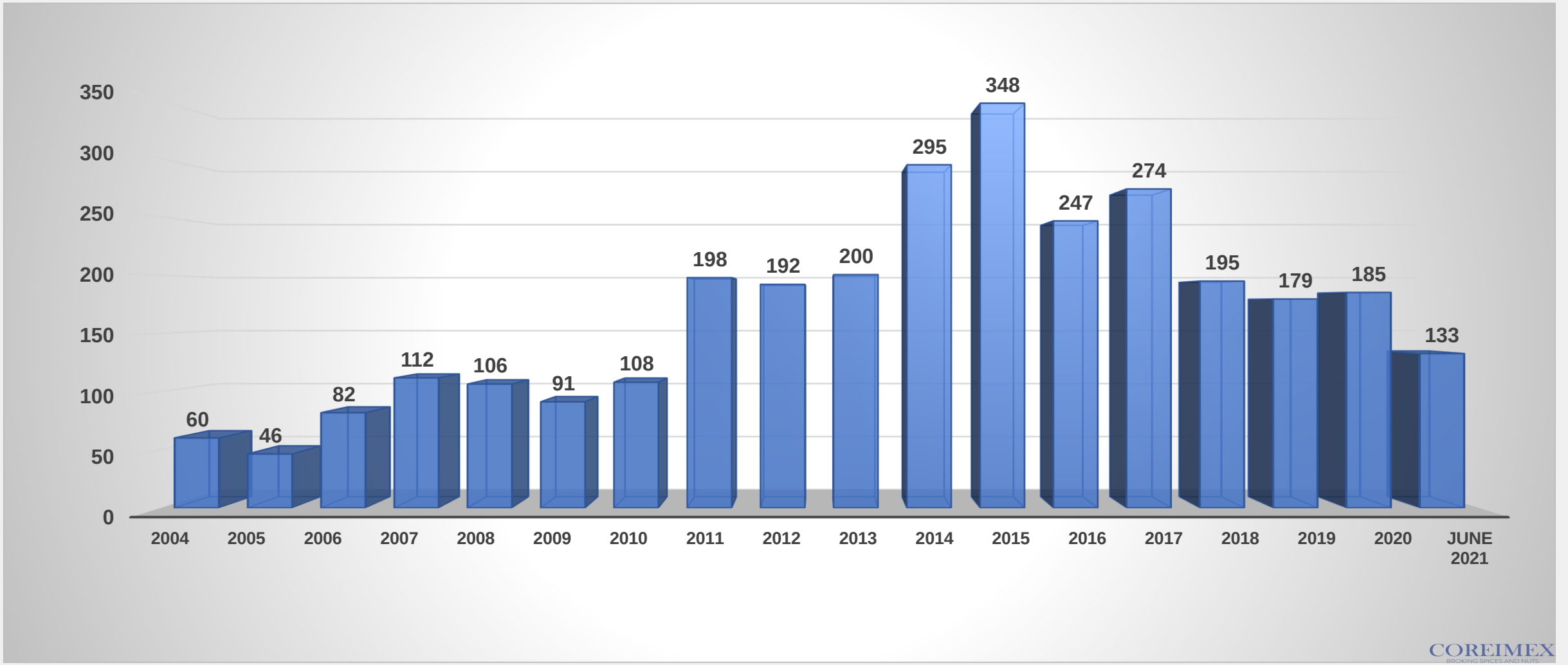
5.5. Yearly Value in MM US$/FOB: 2004 - June 2021



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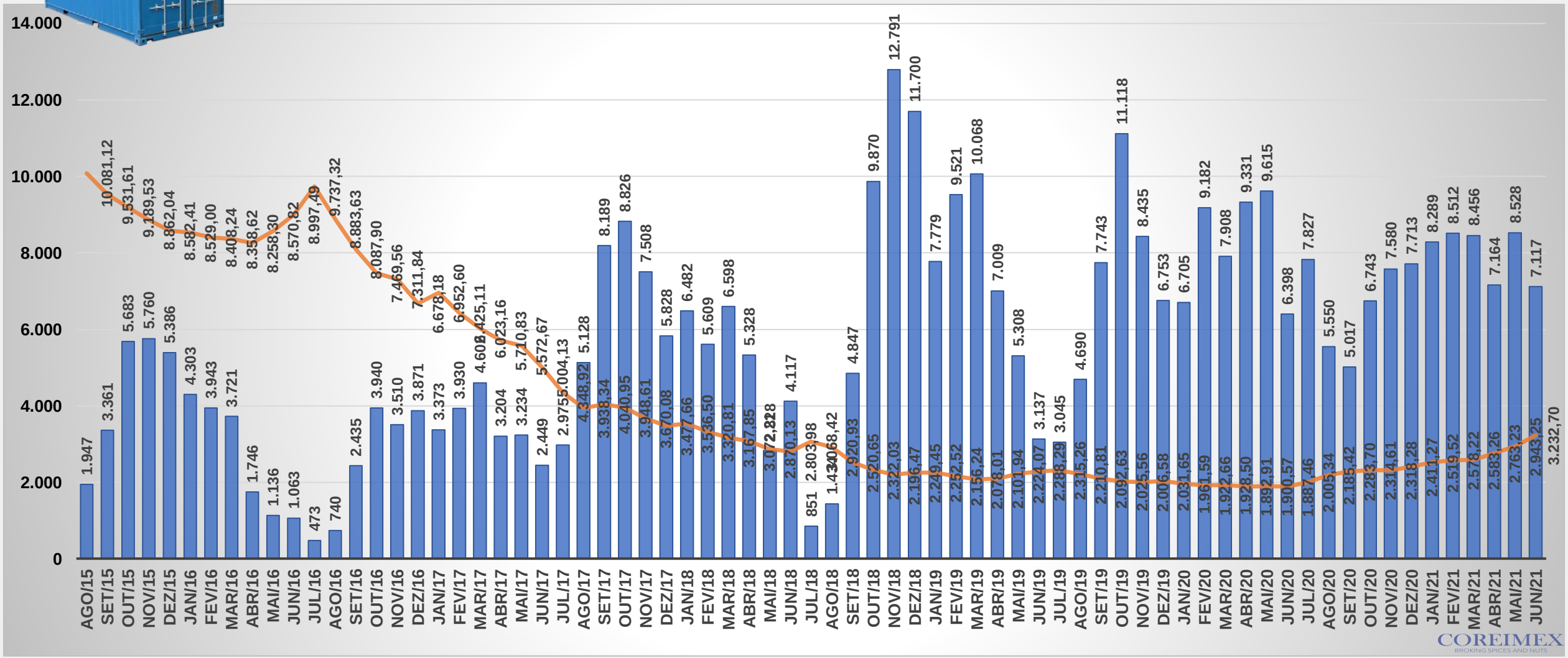
5.6. Monthly Quantity Exports in MT **X** Monthly Average Price: August 2015 - June 2021



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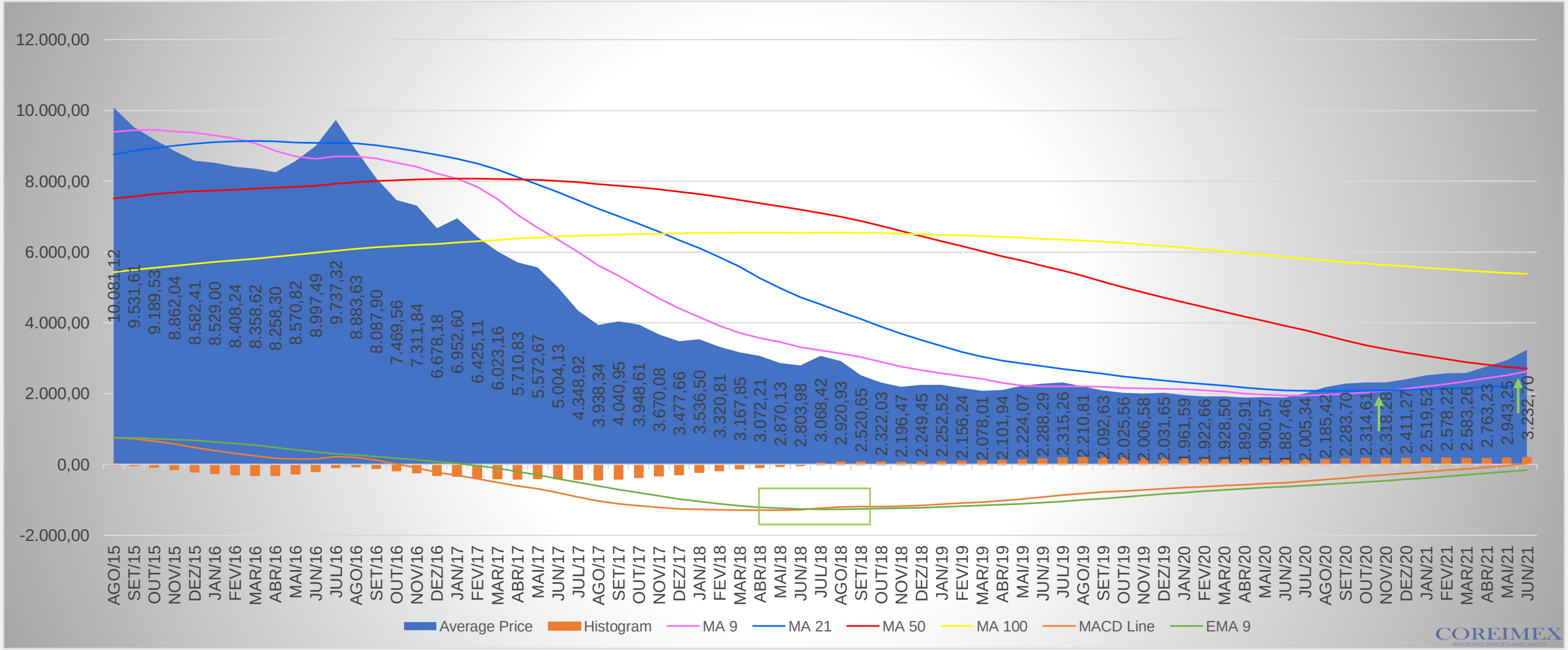
5.7. Monthly Average Price in US$/MT FOB: August 2015 - June 2021



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6. Market Forces that act on the most important fundamentals of the trade.

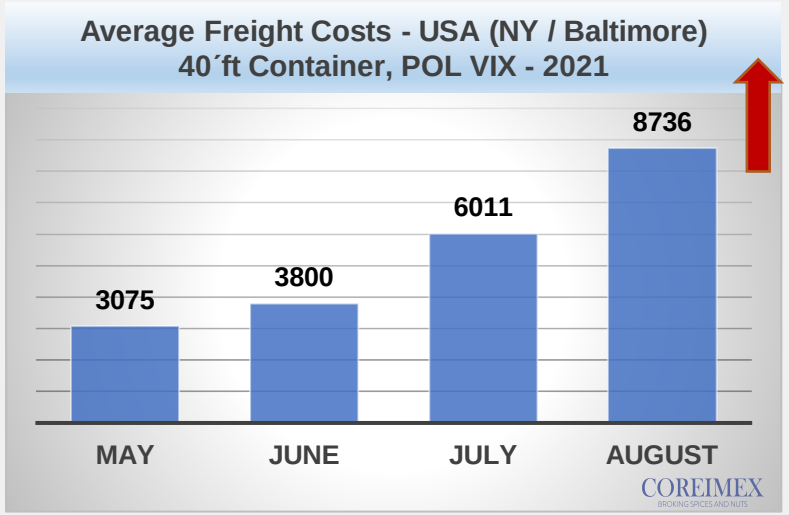
Inflation rate
Supply
Speculations
Demand
Exchange Rate
Traceability
Harvest period
Yield
Production
Consumption increasing rate
Financial strength
Changes on Food Habits
Weather
Harvest Technologies
Quality
GDP
Health care
Domestic consumption
Health and cosmetic applications
Stock
Food Safety
Sustainability
Organic
Freight
Import Regulations
Tariffs

7. Logistic Disruption and Covid-19 Pandemic Status

- In the beginning of the COVID-19 outbreak the shipping lines reduced its voyages of their fleet as the world trade slowed down in first instance.
- As the economies reopened in result of reduction in the number of Covid-19 cases, there has been an increase of commercial activities between certain economies, therefore causing a disruption in the supply and demand of containers and vessel space.
- Locally in Brazil aggressive lockdowns were imposed by State Governments, impacting on transportation of goods and people.
- An imbalance of containers to Brazil lead to vessels delays, and less capacity to meet the demand for transportation.
- On the freight rates, one of the biggest impacts are for shipments to USA, due to the recovery on the economy and greatest demand for shipments to this destination.

7. Logistic Disruption and Covid-19 Pandemic Status

- Brazil has seen a strong increase on freight rates in these last 2 months of 2021. The same has been seen in freights rates from Asia to USA and Europe, starting in November 2020.



- In the past, pepper exporters used to have a lead-time of two weeks for making the booking and shipping the cargo. Now this lead-time has jumped to 40 days.

- Up to now, a fast vaccination plan implemented by the Brazilian Government has put the pandemic situation under control. Economy is on a re-opening mode at this moment.

8. Stock Overview

2019					2020					2021					Balance Stock end June 2021
Stock Brgt Forward	Production	Import	Dom Cons +2%	Export	Stock Brgt Forward	Production*	Import	Dom Cons +2%	Export	Stock Brgt Forward	Production	Import (Jun 2021)	Dom Cons +2%	Export (Jun 2021)	
48.550	90.000	230	8.281	84.607	45.892	95.000	150	8.446	89.569	43.027	98.000	76	8.615	48.066	84.422

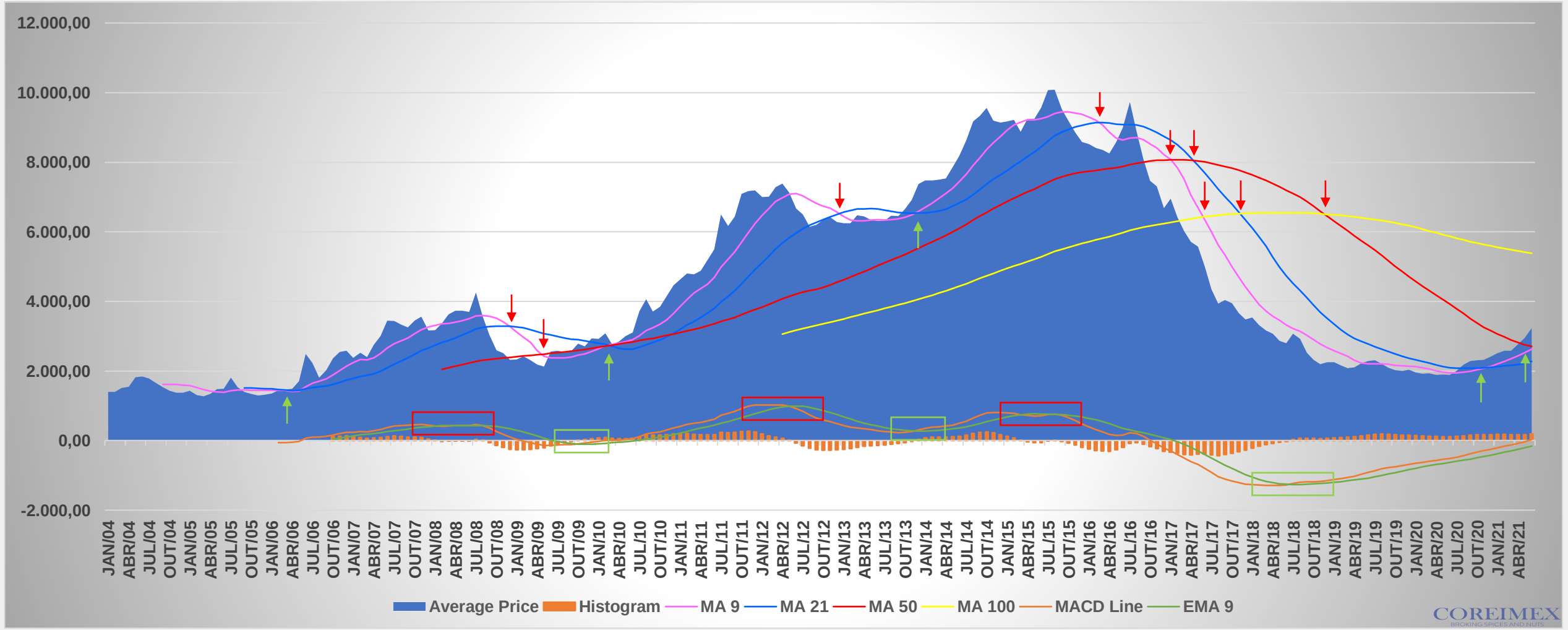
- To forecast an approximate number of what would be the Estimated Stock Brought Forward to 2022, we have doubled the Exports and Imports numbers from June 2021 to be considered as 12 months of the year.

2021					Estimated Stock Brgt Forward to 2022
Stock Brgt Forward	Production	Import (Dec 2021)*	Dom Cons +2%	Export (Dec 2021)*	
43.027	98.000	152	8.615	96.132	36.432

- Based on the stock overview calculations, the carry over stock started to decrease in 2020 and 2021 from its highest in 2019.

9. Brazilian Pepper Prices Outlook

Monthly Average Price in US$/MT FOB: Jan 2004 - June 2021



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Thank you!