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Brazilian Avocado Industry: Is There More Space to Grow?

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Abstract: Avocado crops have been increasing in the past few years, in Brazil and in the world. One of the reasons is the increase in international demand, with higher per capita consumption in the main countries. This scenario resulted in high prices and profitability. The high demand also boosted Brazilian shipments of avocados, but Brazil is still not one of the main exporters, despite being the seventh biggest world producer — the current predominance in Brazil is the domestic market. Considering that avocado crops have already increased in the past few years, is it possible to continue to increase? In Brazil, consumption can still increase, mainly for avocado hass — this variety is little known by Brazilian population, and it depends on actions to promote consumption, but since there is a forecast of a production increase, it is possible that margins will not be so high in the future. In the international market, it is important to open new markets; so, this increase in production can be orientated to new external buyers.

Key words: production, export, consumption, evolution and perspectives

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1. Introduction

Avocado's origin is in Mexico and in Central America, but its cultivation has been expanding around the world in the past years, mainly in tropical and subtropical zones, where they are better adapted in terms of edaphoclimatic conditions (Duarte, 1998), as happened in Brazil. According to Instituto Brasileiro de Geografia e Estatística (IBGE, 2024), the Brazilian production changed from 212.9 thousand tons in 2017 to 338.2 thousand tons in 2022, an increase of 59%. Cultivated area grew 49% in the same period, reaching 19.4 thousand hectares in 2022.

Brazilian shipments of avocados also increased significantly: 234% between 2017 and 2023, to more than 26 thousand tons, according to Comexstat (2024). Avocado occupies the ninth place in the ranking of Brazilian fresh fruits exported in 2023.

One of the reasons for this constant increase is the good international demand (CBI, 2023). In Europe, for example, per capita consumption grew 17% from 2019/20 to 2020/21, according to Fruit Trop (2022), reaching

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1.4 kilograms per inhabitant per year, but still below the United States level, were consumption is almost 4 kilograms per inhabitant per year.

Despite this increase in Brazilian exports, Brazil is not so relevant among the biggest world exporters of avocado. According to Faostat (2024), Brazil was only the 22º largest exporter of avocados in the world in 2022. However, as for production, its position in the ranking rises to the 7th place — the current predominance in Brazil is the domestic market.

In this scenario, this paper aims to investigate the avocado industry in Brazil, exploring the factors that resulted in area and production increase in the past years. Moreover, this study wants to investigate if there is more space for avocados to continue growing in the next years in Brazil.

2. Methodological Procedures

The research applies a qualitative approach with exploratory type (Cooper, Schindler, 2003), to bring proximity and clarity to the object of the study (avocado market in Brazil and in the world), helping to develop concepts that are not always possible to predict before the survey (Cooper, Schindler, 2003).

For this research, the source was secondary data from the main official institutions in Brazil and in the world. Among the national ones, those used were Municipal Agricultural Research (PAM, in Portuguese acronym), from Instituto Brasileiro de Geografia e Estatística (IBGE, 2024); export numbers from ComexStat (Comexstat, 2024); Campo Futuro Project, from Confederation of Agriculture and Livestock of Brazil in partnership with Senar (CNA, 2023); and production data for São Paulo state from Instituto de Economia Agrícola (IEA, 2024). Among international sources, production and export data from Food and Agriculture Organization of the United Nations (Faostat, 2024); import and export data from Comtrade, also from United Nations (Comtrade, 2024); and the report from Centre for the Promotion of Imports from developing countries (CBI, 2023).

In order to complete the survey, the president and vice president of "Abacates do Brasil", the Brazilian growers association, were interviewed, to complement with qualitative information. The interviews were conducted by phone and took approximately 30 minutes each. The interviews were carried out using a semi-structured questionnaire, approaching points such as: Brazilian production; Brazilian exports and competitors; internal and external consumption; main challenges and opportunities in the sector.

According to Flick (2013), semi-structured interviews can be changed depending on the progress of the interview and aim to capture the interviewee's opinion of the topic.

3. Results and Discussion

3.1 Avocado Industry in Brazil and in the World

According to Faostat (2024), the world avocado production has increased significantly among other fruits. Considering the last five years (2017-2022), the growth rate was 42%. The biggest world producers in 2022 were Mexico, Colombia and Peru — Brazil was in the seventh place (Table 1), according to Faostat (2024).

The Brazilian avocado production increased from 212.9 thousand tons in 2017 to 338.2 thousand tons in 2022, 59% up, according to IBGE (2024). Regarding the cultivated area, avocados have a high growth rate in this period, of 49% (IBGE, 2024).

Table 1 Top Global Avocado Producers in 2022

Position	Countries	Production (thousand tons)
1	Mexico	2,529.58
2	Colombia	1,090.66
3	Peru	866.46
4	Dominican Republic	737.20
5	Kenya	458.44
6	Indonesia	389.00
7	Brazil	338.24
	Others	2,568.70
	Total	8,978.28

Source: Faostat (2024)

The Southeast is the main producer region in Brazil, with 80% of national harvest, according to IBGE (2024). The South accounts for 10% of the production and the Northeast, for 8% — this region has the highest growth rate in the past years.

São Paulo state has the major participation in area and production in Brazil (IBGE, 2024), and it is considered as one of the most technological states, along with Paraná and Minas Gerais. These three states were responsible for 85% of the total Brazilian production in 2022, according to IBGE (2024). Avocado tree was well adapted to this regions' weather — adequate rainfall and temperatures.

In São Paulo, three regions stand out: Ourinhos, São João da Boa Vista and Mogi-Mirim. Together, these three cities harvested around 50% of São Paulo's avocado production in 2022, according to IEA (2024).

In Brazil, tropical avocado and hass avocado are the main produced types. Avocado sales occur practically all year-round, with the harvest alternating between the varieties (Table 2).

Table 2 Harvest Schedule in Brazil, By Variety

Variety	Months of harvest
Hass	February to September
Breda (tropical)	September to December
Fortuna (tropical)	February to July
Geada (tropical)	November to February
Margarida (tropical)	June to November
Ouro Verde (tropical)	June to August
Quintal (tropical)	March to July

Source: Abacates do Brasil website, 2024

However, Brazil is not a major exporter in the global ranking, because the country ships only a small percentage of its total production — 5% of the total harvested in 2022, calculated based on Faostat (2024) data. On the other hand, important competitors of Brazil (Mexico, Chile and South Africa, for example) exported more than 40% of their total production in 2022 (Faostat, 2024).

Brazil exports avocados in a small market "window", which occurs from mid-February to May, with a peak between March and April., between February and May, with the peak between March and April. Its main competitors are from the Southern Hemisphere and they have the same harvest period, namely Peru, Colombia and South Africa. The only exception is Chile — the country produces in high altitude and has a calendar more similar to Northern Hemisphere countries.

Table 3 Top Global Avocado Exporters in 2022

Position	Countries	Volume (thousand tons)
1	Mexico	1041.79
2	Peru	583.21
3	Netherlands	417.77
4	Spain	149.92
5	Chile	109.12
6	Kenya	103.24
7	Colombia	98.60
8	South Africa	62.98
...	Others	487.80
22	Brazil	8.53
	Total	3062.96

Source: Faostat (2024)

Since 2019, there was a significant growth in Brazilian exports of avocados to Europe and especially to South America. Both Europe and North America are heavy consumers of this fruit and they have been signaling an increase in imports in the mid-term.

Brazilian exports to South America rose after Argentina opened its market to Brazilian avocados in 2019. According to Comexstat (2024), almost 83% of Brazilian sales to South America in 2023 were to allocated Argentina.

From 2017 to 2022, the European Union increased avocado imports (considering non-European Union countries) by 39%, and Peru, Colombia, Kenya and Morroco were the countries with biggest increases in exports, according to Comtrade (2024). On the other hand, Brazilian exports to Europe decreased in this period (Table 4).

Table 4 Main Avocado Suppliers in the European Union (Non-European Union Countries)

Countries	**2017 (tons)**	**2022 (tons)**	**Growth rate (%)**
Peru	157803	294846	87%
Chile	97716	60474	-38%
Colombia	27843	57873	108%
Kenya	25392	56661	123%
Israel	54207	53394	-2%
Marroco	13873	51336	270%
South Africa	41608	47226	14%
Mexico	46716	21703	-54%
Dominican Republic	6996	10160	45%
Tanzania	3043	9597	215%
Brazil	7177	4834	-33%
Others	3784	9577	153%
Total	486159	677681	39%

Source: Comtrade (2024)

Avocado has been standing out in the past decade both in Brazil and abroad because of its nutritional characteristics. As an answer to the demand growth, the Organization for Economic Co-operation and Development (OECD/FAO, 2021) projects that avocado will become the second more commercialized tropical fruit until 2030, just behind banana.

3.2 The Main Influences on the Avocado Industry Performance

The higher avocado production in Brazil and in the world is related to the increase in its popularity. Its healthy appeal and its versatility, with different usage options (cooking, cosmetic and even therapeutic) are important factors. It is worth noting that, in relation to culinary use, avocado consumption in Brazil is predominantly fresh; however, in North America and Europe countries, the fruit is used mainly as an ingredient or in a sauce (Pereira, 2015).

According to a CBI (2023) report, avocado has been the most dynamic fruit in the past few years, with demand surpassing supply most of the time. However, some periods of oversupply have been observed, despite the fact that the European market still has space to absorb more avocados. In the mid-term, avocado tends to become more traditional in the European retail, and this scenario may reduce the consumption growth until it stabilizes. It is important to remember that per capita consumption in Europe increased 17% from 2019/20 to 2020/21, according to Fruit Trop Magazine (2022), reaching 1.4 kilogram per inhabitant per year, but still below United States (where the consumption reaches almost 4 kilograms) and Canada (close to 3 kilograms per inhabitant per year). Mexican people consume between 6.5 and 7 kilograms per inhabitant per year (Fruit Trop, 2022).

Analyzing exclusively the growth in the Brazilian production, beyond the expansion of Brazilian and worldwide demand, another reason is the attractive price both to export and in the domestic market. In fact, according to Campo Futuro project, whose data were obtained with the Confederation of Agriculture and Livestock of Brazil (CNA, 2023), the average profitability for avocados in a modal property in Piraju (city in São Paulo state) was above the average for other fruits in 2022: the average profitability, comparing gross income with total costs, was 35%.

In Brazil, tropical avocado and hass avocado have distinct sale prices. According to Prohort (2023) data, while tropical avocado was sold at BRL 4,57/kilogram, on average, in 2022, avocado hass values were at BLR 11,52/kilogram (average price of the year, considering trades in the wholesale market of São Paulo state). This huge difference is because of supply, since avocado hass availability is still restrict. Moreover, production costs for avocado hass are higher than those fortropical avocado.

In this scenario, it is evident that Brazilian consumption is concentrated in tropical avocado variety. However, this situation may change in the future, because "Abacates do Brasil" (or Brazilian's Avocados", in English), the association of growers, predicts an increase for avocado hass production. If it is confirmed, the supply may grow in the Brazilian market and prices may attract consumers.

52% of "Abacates do Brasil" associates were cultivating hass avocado in 2023, but the major part of the area was recently implemented — in the past two years — and is still not in production. The association forecasts that the hass avocado Brazilian area is around seven thousand hectares, and the biggest part of production may be sent to the international market. In 2023, around 70% of hass production were exported, according to "Abacates do Brasil" information.

3.3 Challenges and Opportunities

In the international market, avocado hass has a consolidated consumption. Therefore, the Brazilian industry has the challenge of opening new markets for the national avocado — some of them are already in course. Another challenge refers to the strong competition, mainly with Peru, Colombia and South Africa, because these countries harvest at the same time that Brazil harvests.

It is important to remember that the avocado cultivated area has been increasing not only in Brazil, but in other important producing countries. In the international market, this scenario brings risks of an imbalance between supply and demand. So, Brazil needs to improve domestic consumption. For example, the hass avocado, with low consumption in Brazil, needs to be promoted. Prohort (2023) data show that only 3% of avocado sales in Brazilian wholesale market involved the hass variety in 2022.

In order to understand other challenges and opportunities, Lígia Carvalho and Jonas Octávio (director president and vice president of “Abacates do Brasil”, respectively) were interviewed. The main results are summarized in Table 5.

Table 5 Opportunities and Challenges to Avocado Industry in Brazil, According to Brazillian Growers’ Avocado Association (“Abacates do Brasil”)

Opportunities	Challenges
Nutritional appeal	Agronomic practices need to advance, aiming efficiency for tropical and hass avocados varieties
Versatility for salted and sweet recipes	Workforce training and qualification
Possibility of industrialization for nutrition, cosmetics and therapeutic	Improvements in production mechanization (to increase efficiency and reduce production costs)
Growing of hass avocado presence in the national market	Evolution in logistics and in supply chain (domestic and international)
Water availability in the main producing regions in Brazil (it is a challenge to other producing countries)	
New commercial agreements in progress (example: Japan, United States and Chile)	

3.4 Perspectives

OECD/FAO data (2021) show that the global avocado consumption may increase until 2030, mainly in Europe and in countries where the consumption is still not consolidated. However, considering that there were recent plantings in almost all producing countries and that the avocado tree takes between three and four years to start producing, new increases in area, even with focus on the international market, require caution.

The OECD/FAO (2021) projects that the world avocado production may grow around 38% until 2030 (comparing to 2021), going from 8.7 million tons to 12 million tons, and the most part of production is expected to continue in Latin America and the Caribbean, because of good weather conditions. Exports are likely to surpass 4 million tons in 2030, against 3.1 million in 2021. This increase is so significant that avocado trades may overcome international sales of mango and pineapple up to 2030 (OECD/FAO, 2021).

About the Brazilian market, the concern is similar: the national area rose significantly in recent years, and production (which had already increased recently) can grow even more when all the new areas start to harvest. Moreover, avocado growers reported that the profitability has already decreased in recent years.

According to Prohort (2023) data, average avocado prices (in real terms, deflated by IGP-DI December 2022) in São Paulo state showed a downward trend in the past few years, specially concerning hass avocado — this variety has greater added value and its production increased significantly in recent years. From 2018 to 2022, the real average price of tropical avocado reduced from BRL 5.35/kilogram to BLR 4.48/kilogram, 16% down, while values of hass avocado dropped from BRL 19.12/kilogram to BLR 13.35/kilogram — 30% less in the same comparison.

In this scenario, actions to benefit the avocado industry, such as opening new international markets and promoting the domestic consumption, will be more and more necessary to balance supply and demand.

4. Conclusion

Both avocado cultivated area and production have been increasing in Brazil and in the world, because of its rise in popularity, which is reflecting in consumption. In Brazil, this fruit has shown to be really promising, with an attractive profitability in recent years.

International forecasts indicate that global consumption will continue to increase, especially in Europe. This scenario may continue to favor international avocado sales, including the Brazilian export sector.

The increase in hass avocado cultivation is an opportunity for Brazil to enlarge its market share in the international market. However, the national market will continue as the main market, and it is important to focus on promoting the fruit for Brazilian consumers, mainly the hass avocado variety, less common than the tropical avocado.

It is important to highlight that the recent increase in cultivated area might reduce margins in the future, considering that avocado supply must rise in Brazil. This scenario is applied to both hass and tropical avocados varieties. Therefore, growers must improve technology to reduce production costs, and improve supply chain efficiency in order to make better decisions.

References

Abacates do Brasil (2024). “Abacates do Brasil Association”, available online at: https://abacatesdobrasil.org.br/abacates-do-brasil/#variedades, accessed on 03-12-2024.

CBI (Centre for the Promotion of Imports from developing countries) (2023). “The European market potential for avocados”, CBI Market Information, Ministry of Foreign Affairs of the Netherlands, January, 2023, available online at: https://www.cbi.eu/market-information/fresh-fruit-vegetables/avocados/market-potential, accessed on 03-20-2023.

CNA (Confederação da Agricultura e Pecuária do Brasil) (2023). “Projeto Campo Futuro. Custo de produção de frutas”, available online at: https://www.youtube.com/watch?v=lTGOpJbIVTQ&t=458s, accessed on 03-20-2023.

Cooper D. R. and Schindler P. S. (2003). *Métodos de Pesquisa em Administração* (7ª ed.), Porto Alegre: Bookman.

COMEXSTAT (2024). “Base de dados da Secretaria de Comércio Exterior do Ministério do Desenvolvimento”, Indústria e Comércio Exterior, available online at: http://comexstat.mdic.gov.br, accessed on 03-12-2024.

COMTRADE (2024). “Commodity trade statistics database from United Nations: Trade data”, available online at: https://comtradeplus.un.org/TradeFlow, accessed on 03-12-2024.

Duarte O. R. (1998). *A cultura do abacateiro: Boa Vista: Embrapa-CPAF-Roraima*, p. 14, Embrapa-CPAF-Roraima, Circular Técnica.

OECD/FAO (2021). “OECD/FAO Agricultural Outlook 2021-2030”, available online at: https://www.fao.org/3/cb5332en/Other.pdf.

FAOSTAT (2024). “Food and agriculture organization database”, available online at: http://faostat.fao.org, accessed on 03-12-2024.

Flick U. (2013). *Introdução à Metodologia de Pesquisa: Um guia para iniciantes* (1st ed.). Penso.

Fruit Trop (September/October 2022). “Avocado: How to withstand inflation?”, *Fruit Trop Magazine*.

IBGE (Instituto Brasileiro de Geografia e Estatística) (2024). “Table 5457 - Área plantada ou destinada à colheita, área colhida, quantidade produzida, rendimento médio e valor da produção das lavouras temporárias e permanentes”, available online at: https://sidra.ibge.gov.br/tabela/5457, accessed on 03-14-2024.

IEA (Instituto de Economia Agrícola) (2023). “Estatística de Produção Paulista”, available online at: https://www.iea.agricultura.sp.gov.br/out/index.php, accessed on 03-20-2023.

Pereira P. A. (2015). “Evolução da produção mundial e nacional de abacate. Monografia (Graduação em Engenharia Agronômica) - Faculdade de Agronomia e Medicina Veterinária”, Universidade de Brasília. Brasília.
Prohort B. I. (2023). “do Mercado Atacadista de Hortigranjeiros”, available online at: http://dw.ceasa.gov.br, accessed on 03-20-2023.
Trade Helpdesk, European Commission Statistics (2024). Available online at: https://trade.ec.europa.eu/access-to-markets/en/statistics, accessed on 03-12-2024.