

BRAZILIAN HORTICULTURE Opportunities for Business and Investments

Update Report

March 13th, 2026

INTRODUCTION

EACEA Greenhouse Solutions is a Brazilian consulting company focused on horticulture and plasticulture. EACEA is recognized in the market as a specialist in technologies for intensive cultivation, fertirrigation and production in protected and/or controlled environments. Founded in 2010, EACEA portfolio includes national and foreign producers and companies. EACEA stands out for pioneering initiatives in Brazil.

In 2015, EACEA implemented its own training and technology center in Cunha SP – Horticunha Project - where hundreds of professionals and producers were able to take courses and follow the technological and management innovations for the cultivation of vegetables inside greenhouses.

EACEA was hired, in September 2025, by the Embassy of the Kingdom of the Netherlands in Brazil to do an update of the study carried out in December 2020 by the Embassy and IBRAHORT on Brazilian horticulture opportunities and investments. We have updated the production and marketing data of the crops presented in the original report including some additional data regarding fruit and flower sectors in Brazilian horticulture with real opportunities for business and investments from foreign companies and growers.

Since 2020, the Brazilian horticultural sector starts recovering from Covid19 crises when it is confronted to global events like the Ukraine war in the beginning of 2022, followed by USA tariffs against Brazil in 2025 and, more recently, by the Middle East war in February 2026. Such global events are unpredictable and pose a major risk to Brazilian agriculture, which is, extremely, dependent from imported goods, specially, on fertilizers and diesel.

On the other hand, the recent agreement signed between Mercosur and EU opens new horizons to export agricultural products and to import from European equipment and inputs. This agreement offers an opportunity to accelerate the reduction of technological gap in Brazilian horticulture. In this sense, we introduced in the report an analysis of the main macroeconomic indicators on different scenarios for the development of Brazilian horticulture, highlighting business and investment opportunities.

I hope that this document can contribute to bringing foreign companies and institutions closer together to invest in the construction of a robust Brazilian horticulture sector. And answer to the high expectation that the entire world places in Brazil concerning the global demand for food and vegetables.

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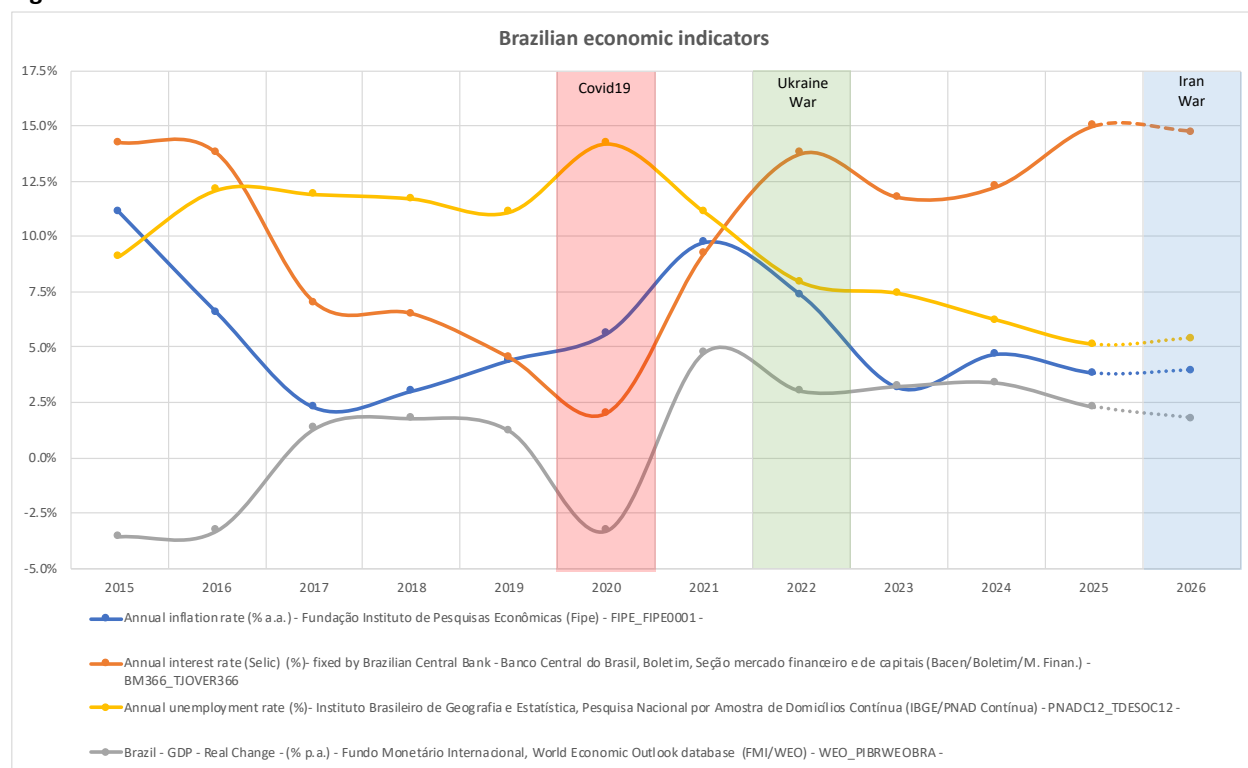
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THE BRAZILIAN HORTICULTURE SECTOR AFTER PANDEMIC CRISES

The fruit and vegetable sectors were affected by the covid-19 pandemic in 2020, mainly due to the drop-in economic activity, the partial restriction of commercialization, and changes in consumption habits. In 2020, Brazilian GDP plunged to -3.3% with the unemployment rate around 14.2% (Figure 1). The improvement of situation came from government actions in the economy combined with a greater mobility of people and the opening of commercial establishments, especially in the second half of the year. In terms of restriction of domestic sales, it was more evident in the period between the end of March and May, when wholesalers worked in a limited way, some street markets were suspended, and part of the restaurants were closed. The lower mobility of the population also restricted the flow of commercialization of more perishable products, such as leafy greens and some fruits. At the end of 2020, the sector was still feeling the effects of interruptions in sales for important customers, such as hotels, schools, and part of restaurants. In the case of export-oriented chains, sales of Brazilian fresh fruits performed well throughout 2020 favored by the high dollar and external demand. The domestic demand for fresh fruits and vegetables was more heated at the beginning of the pandemic in late March and April, but after a few months, processed products took place again. A positive behavior throughout the pandemic was that, with the recommendation of home isolation, more people started to prepare their own meals, resulting in a firm demand for fresh and semi-processed foods gradually abandoned with the relaxation of the pandemic rules.

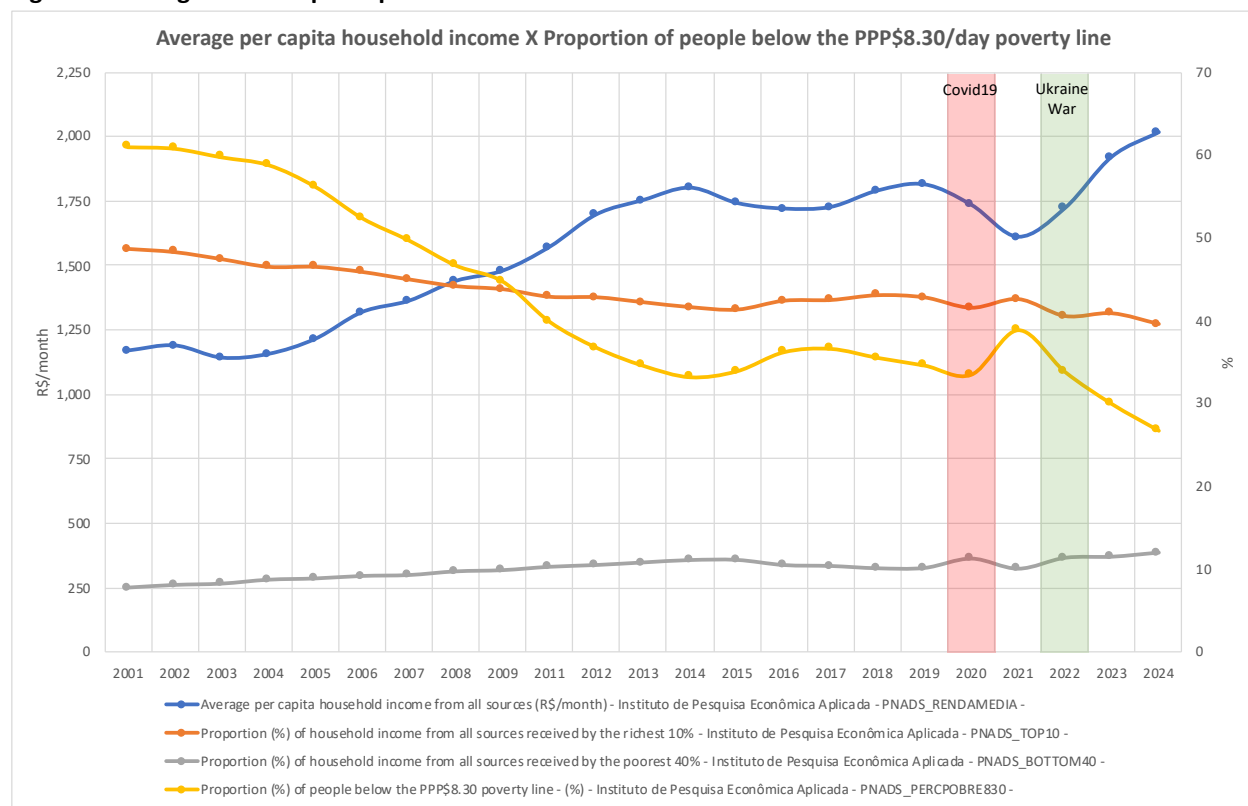
Figure 1: Brazilian economic indicators from 2015 to 2024.



Source: IPEA

In 2021, COVID-19 in Brazil brought some relief to the population, but the Brazilian economy was unable to take off. HF sector faced weakened demand, mainly due to the very limited income of most of the population (Figure 2), high indebtedness, and the generalized increase in food prices. The increase in the prices of fruits and vegetables was great due the increase in production costs and 2 digits inflation, reducing the purchasing power of the population. The Brazilian GDP grows again at 4.8% and the unemployment rate falls to pre-pandemic values. The basic interest rate (Selic) rises to 9.25% to contain inflation reducing investments. The vegetable planted area does not replace the losses during the pandemic. The drop in the purchasing power of Brazilians reaches its minimum.

Figure 2: Average Brazilian per capita household income from 2001 to 2024.

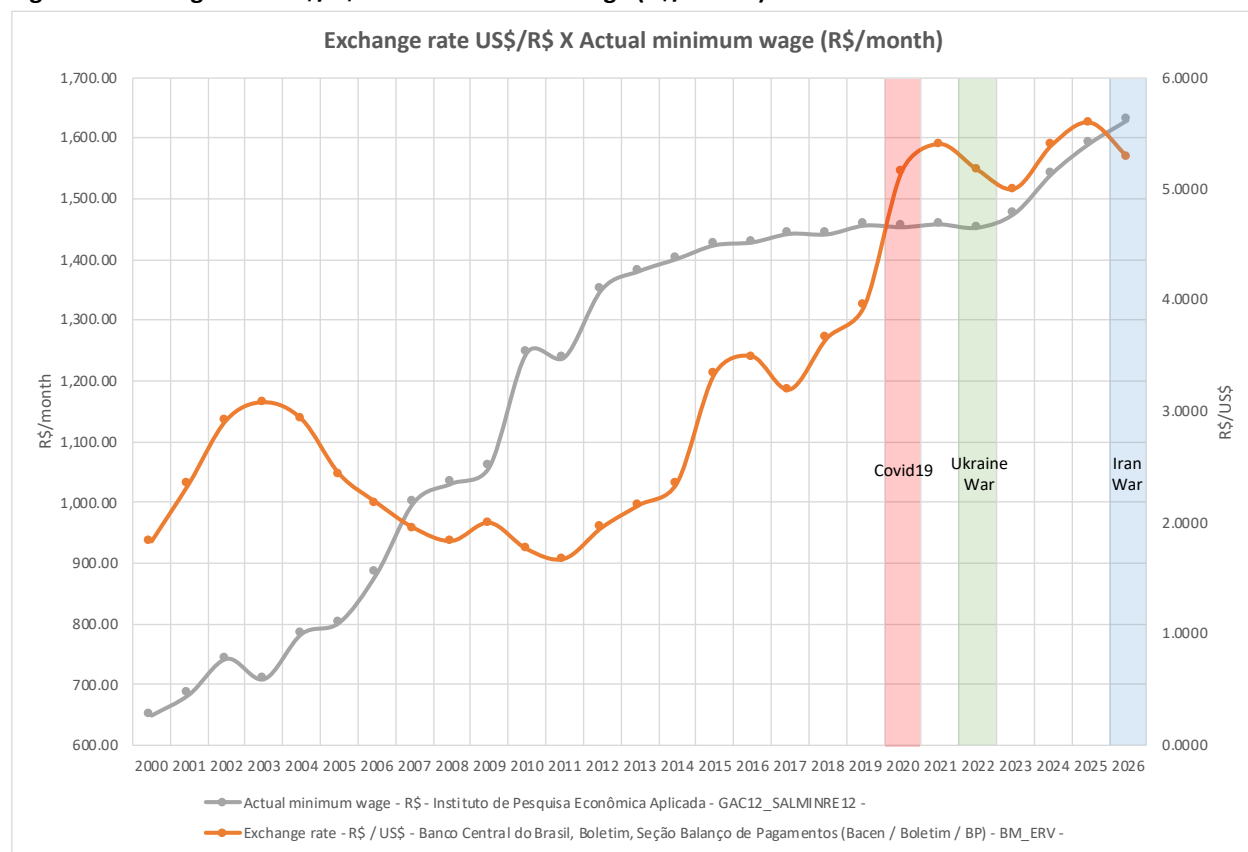


Source: IPEA

At the end 2022, Brazilian GDP attempted 3% and the basic interest rate touched 13.75%, further limiting investments in the country. On the other hand, purchasing family power improves to pre-pandemic levels, inflation reduced 7.3% and unemployment decreases, mainly driven by the services sector to 2011 levels. With high prices, food sale revenues in supermarkets increase, but the volume remains relatively stable. In fruit exports, after a record sale in 2021, there is a lower performance in 2022 due to higher logistic and production costs reinforced by the war between Russia and Ukraine, which boosted the values of freight and fertilizers. The vegetable area grows and recovers the losses of 2020 and 2021.

In 2023, the planted area of vegetables, always according to CEPEA¹, returns to pre-pandemic values. Exported fruits, as mangoes and grapes, continue to receive investments even with the high basic interest rate. The same occurred for the planting areas destined to industry, such as potatoes and tomatoes for industry replacing Brazilian volume imported annually. In consumption, the fresh market grows more in value than in volume. Sectors such as convenience and domestic consumption of processed and semi-processed foods (both in terms of volume and value).

Figure 3: Exchange rate US\$/R\$ X actual minimum wage (R\$/month) from 2000 to 2026.



Source IPEA.

In 2024, the unemployment rate dropped to 6.2%, creating problems for many producers, added with an inflation rate close to 5% and a tiny GDP of 3.4%. In this scenario, the interest rate continues to increase to reach 12.25%. On the other hand, low unemployment and government incentives increase household incomes at a steady level. New trends seem to be consolidating in the domestic market: higher revenue should come from an increase in value and not from the volume sold, consumption of fruits advances more than that of vegetables and the demand for processed vegetables remains heated (intake of integral juice grows in Brazil, but retreats in the world). Convenience in the preparation of products is increasingly as an important value for the Brazilian consumer and retroactively defines the entire production and marketing chain.

¹ Based on the CEPEA data of following crops: lettuce, potatoes, onions, carrots, tomatoes, bananas, apples, papayas, mangoes, watermelons, melons and table grapes.

In 2025, the Brazilian economy maintains a small growth in a challenging context of high interest rates and an inflation rate that resists. Investments in the countryside are slowing down and household consumption is retracted. The result is also a retraction of planted areas compared to the previous year, offset by productivity gains due to favorable weather. Products such as potatoes, carrots and especially onions have significant marketing losses, further reducing investment prospects. The fruit area remained the same compared to 2024. Faced with trade uncertainties, intensified by the North American tariff act, the sector has become more selective in investments.

Despite the start of the Middle East war at the end of February, the interest rate had a slight drop in March in Brazil, with the expectation of a stability or fall for the coming months. Diesel prices grow upon supply uncertainties, and fertilizers and other input prices worry Brazilian agriculture again as during the war in Ukraine. To make the situation even worse, 2026 is a presidential election year. Therefore, the Brazilian economy, in 2026, is expected to grow moderately, still under high interest rate, a slowly inflation down and a restricted credit for families, companies and rural properties. Consumption tends to remain contained, pressured by delinquency and the gradual recovery of income, while investment remains constrained by the capital cost. Agricultural areas for vegetables should remain stable and fruits areas should expand in regions with more technology use. The problems of water availability, labor and rising production costs are the challenge not only for the next year but also for the next decade.

PLANTED AREA, PRODUCTIVITY AND VALUE OF MAIN CROPS OF BRAZILIAN HORTICULTURAL SECTOR

Statistics from horticulture sector are fragmented and insufficient. The vegetable production planted area in 2020 was estimated in 701,221 ha IBRAHORT (2020), HF BRASIL BRASIL (2025) due a reduction of 8% compared to previous year. Similar statistics presents values of 770,471 ha for 2022, 784,883 ha for 2023 and 820,987 ha for 2024 indicating a 17.1% area growth compared to 2021. These numbers include tomatoes, potatoes, onions, carrots, garlic and lettuce, but does not include melons and watermelons.

For the present report we will use annual data from the IBGE Brazilian Statistic Institute. The IBGE follows annually data of planted areas, yields and production from a larger list² embracing a larger list of Brazilian fruits and vegetables. In this study 4 main vegetables and 8 main fruits with major importance in domestic market were chosen from this list and presented in following Tables 1 to 6. For the 6 main vegetables presented in the original report, only 4 (garlic, potatoes, onions, and tomatoes) have annual statistics available by IBGE.

Planted area for vegetable had -5.6% reduction in the last decade meanwhile fruit area grew 5.8%. On the other hand, most of the vegetal and fruits production and yield had a significative increase as onions with 18% and grape 49.7% of yield growth in the last decade. Lime yield declined -4.9% due greening virus that affects many of citrus orchards in Brazil.

Note that these only 12 varieties (4 vegetables and 8 fruits) represent, approximately, US\$ 12.3 Billons per year, equivalent to 10% of the Brazilian agribusiness GDP (US\$ 121.4 billons in 2024) or about 35% of the horticultural sector GDP (US\$ 34,9 billons in 2024)³.

² PAM (Produção Agrícola Municipal) (<https://www.ibge.gov.br/estatisticas/economicas/agricultura-e-pecuaria/9117-producao-agricola-municipal-culturas-temporarias-e-permanentes.html>)

³ DA SILVA (2026)

Table 1: Vegetable and fruit planted areas from 2016 to 2024 in hectares.

Area (ha)	2016	2017	2018	2019	2020	2021	2022	2023	2024
Garlic	11,406	10,687	10,662	11,122	12,227	13,063	13,307	13,879	12,885
Potatoes	129,953	118,176	120,429	116,968	117,263	116,428	118,755	123,455	124,916
Onions	58,228	51,830	47,779	48,671	47,504	49,025	49,144	49,434	50,057
Tomatoes	64,296	61,509	57,420	54,970	52,163	52,047	54,513	59,313	61,348
Vegetables total	263,883	242,202	236,290	231,731	229,157	230,563	235,719	246,081	249,206
Banana	469,466	470,066	460,215	467,914	454,082	457,907	460,578	462,453	473,464
Lime	46,796	48,311	54,242	56,889	58,511	58,529	62,726	66,745	68,479
Apple	34,317	33,330	33,316	32,433	32,469	32,890	33,311	33,358	33,154
Papaya	35,393	26,860	27,513	28,145	28,488	28,720	27,291	27,281	27,933
Mangoes	64,570	64,588	65,963	67,754	74,888	76,889	78,418	80,665	86,453
Watermelon	94,424	103,631	102,417	100,574	99,248	93,630	85,843	82,353	89,171
Melon	23,166	23,426	23,342	22,364	24,828	23,947	27,598	30,825	31,526
Grape	77,299	75,968	74,480	74,852	74,436	75,730	76,099	78,625	84,429
Fruit total	845,431	846,180	841,488	850,925	846,950	848,242	851,864	862,305	894,609
Total	1,109,314	1,088,382	1,077,778	1,082,656	1,076,107	1,078,805	1,087,583	1,108,386	1,143,815

Source: IBGE PAM

Table 2: Annual variation on vegetable and fruit planted areas from 2016 to 2024 in %.

Area Annual Variation (%)	2016 -2017	2017 -2018	2018 -2019	2019 -2020	2020 -2021	2021 -2022	2022 -2023	2023 -2024	2016 -2024
Garlic	-6.3%	-0.2%	4.3%	9.9%	6.8%	1.9%	4.3%	-7.2%	13.0%
Potatoes	-9.1%	1.9%	-2.9%	0.3%	-0.7%	2.0%	4.0%	1.2%	-3.9%
Onions	-11.0%	-7.8%	1.9%	-2.4%	3.2%	0.2%	0.6%	1.3%	-14.0%
Tomatoes	-4.3%	-6.6%	-4.3%	-5.1%	-0.2%	4.7%	8.8%	3.4%	-4.6%
Banana	0.1%	-2.1%	1.7%	-3.0%	0.8%	0.6%	0.4%	2.4%	0.9%
Lime	3.2%	12.3%	4.9%	2.9%	0.0%	7.2%	6.4%	2.6%	46.3%
Apple	-2.9%	0.0%	-2.7%	0.1%	1.3%	1.3%	0.1%	-0.6%	-3.4%
Papaya	-24.1%	2.4%	2.3%	1.2%	0.8%	-5.0%	0.0%	2.4%	-21.1%
Mangoes	0.0%	2.1%	2.7%	10.5%	2.7%	2.0%	2.9%	7.2%	33.9%
Watermelon	9.8%	-1.2%	-1.8%	-1.3%	-5.7%	-8.3%	-4.1%	8.3%	-5.6%
Melon	1.1%	-0.4%	-4.2%	11.0%	-3.5%	15.2%	11.7%	2.3%	36.1%
Grape	-1.7%	-2.0%	0.5%	-0.6%	1.7%	0.5%	3.3%	7.4%	9.2%
Veg TOTAL	-30.7%	-12.8%	-1.0%	2.7%	9.1%	8.8%	17.7%	-1.3%	-5.6%
Fruit TOTAL	-14.4%	11.2%	3.4%	20.9%	-1.8%	13.5%	20.7%	31.9%	5.8%
TOTAL	-45.1%	-1.6%	2.5%	23.6%	7.3%	22.3%	38.4%	30.6%	3.1%

Source: IBGE PAM

Table 3: Vegetable and fruit production from 2016 to 2024 in tons.

Production ton	2016	2017	2018	2019	2020	2021	2022	2023	2024
Garlic	132,361	120,896	118,869	130,900	155,741	167,129	181,343	184,844	172,832
Potatoes	3,851,396	3,655,069	3,728,953	3,711,744	3,752,999	3,853,464	3,926,076	4,188,704	4,183,933
Onions	1,654,546	1,615,316	1,540,191	1,560,655	1,499,618	1,638,410	1,662,368	1,639,970	1,678,902
Tomatoes	4,166,789	4,225,414	4,126,988	3,920,997	3,757,078	3,679,256	3,818,784	4,166,017	4,407,502
Vegetables total	9,805,092	9,616,695	9,515,001	9,324,296	9,165,436	9,338,259	9,588,571	10,179,535	10,443,169
Banana	6,625,211	6,584,967	6,723,590	6,831,874	6,593,437	6,803,350	6,923,179	6,901,079	7,046,345
Lime	1,234,691	1,293,774	1,501,783	1,514,811	1,583,097	1,499,714	1,635,289	1,724,815	1,718,010
Apple	1,055,383	1,307,642	1,203,007	1,222,949	983,255	1,297,424	1,047,217	1,183,794	997,470
Papaya	1,296,940	1,058,487	1,065,421	1,171,026	1,234,639	1,259,684	1,188,504	1,139,711	1,149,300
Mangoes	1,094,358	1,089,882	1,320,458	1,421,057	1,546,933	1,505,372	1,622,757	1,758,118	1,838,706
Watermelon	2,088,048	2,312,993	2,244,001	2,292,141	2,183,918	2,141,970	1,933,015	1,782,456	1,978,702
Melon	596,430	541,298	581,478	589,825	634,404	607,057	699,853	867,544	816,939
Grape	1,113,345	1,743,430	1,592,031	1,485,806	1,435,538	1,748,206	1,450,738	1,836,646	1,820,104
Fruit total	15,104,406	15,932,473	16,231,769	16,529,489	16,195,221	16,862,777	16,500,552	17,194,163	17,365,576

Source: IBGE PAM

Table 4: Vegetable and fruit yields from 2016 to 2024 in tons/ha.

Yields (ton/ha)	2016	2017	2018	2019	2020	2021	2022	2023	2024
Garlic	11.6	11.3	11.1	11.8	12.7	12.8	13.6	13.3	13.4
Potatoes	29.6	30.9	31.0	31.7	32.0	33.1	33.1	33.9	33.5
Onions	28.4	31.2	32.2	32.1	31.6	33.4	33.8	33.2	33.5
Tomatoes	64.8	68.7	71.9	71.3	72.0	70.7	70.1	70.2	71.8
Banana	14.1	14.0	14.6	14.6	14.5	14.9	15.0	14.9	14.9
Lime	26.4	26.8	27.7	26.6	27.1	25.6	26.1	25.8	25.1
Apple	30.8	39.2	36.1	37.7	30.3	39.4	31.4	35.5	30.1
Papaya	36.6	39.4	38.7	41.6	43.3	43.9	43.5	41.8	41.1
Mangoes	16.9	16.9	20.0	21.0	20.7	19.6	20.7	21.8	21.3
Watermelon	22.1	22.3	21.9	22.8	22.0	22.9	22.5	21.6	22.2
Melon	25.7	23.1	24.9	26.4	25.6	25.4	25.4	28.1	25.9
Grape	14.4	22.9	21.4	19.8	19.3	23.1	19.1	23.4	21.6

Source: IBGE PAM

Table 5: Annual variation of vegetable and fruit yields from 2016 to 2024 in %.

Annual variation Yields (%)	2016 -2017	2017 -2018	2018 -2019	2019 -2020	2020 -2021	2021 -2022	2022 -2023	2016 -2024	2016 -2024
Garlic	-2.5%	-1.4%	5.6%	8.2%	0.4%	6.5%	-2.3%	0.7%	15.6%
Potatoes	4.4%	0.1%	2.5%	0.9%	3.4%	-0.1%	2.6%	-1.3%	13.0%
Onions	9.7%	3.4%	-0.5%	-1.6%	5.9%	1.2%	-1.9%	1.1%	18.0%
Tomatoes	6.0%	4.6%	-0.8%	1.0%	-1.9%	-0.9%	0.3%	2.3%	10.9%
Banana	-0.7%	4.3%	-0.1%	-0.6%	2.3%	1.2%	-0.7%	-0.3%	5.5%
Lime	1.5%	3.4%	-3.8%	1.6%	-5.3%	1.7%	-0.9%	-2.9%	-4.9%
Apple	27.6%	-8.0%	4.4%	-19.7%	30.3%	-20.3%	12.9%	-15.2%	-2.2%
Papaya	7.5%	-1.7%	7.4%	4.2%	1.2%	-0.7%	-4.1%	-1.5%	12.3%
Mangoes	-0.4%	18.6%	4.8%	-1.5%	-5.2%	5.7%	5.3%	-2.4%	25.5%
Watermelon	0.9%	-1.8%	4.0%	-3.4%	4.0%	-1.6%	-3.9%	2.5%	0.3%
Melon	-10.3%	7.8%	5.9%	-3.1%	-0.8%	0.0%	11.0%	-7.9%	0.6%
Grape	59.3%	-6.9%	-7.1%	-2.8%	19.7%	-17.4%	22.5%	-7.7%	49.7%

Source: IBGE PAM

Table 6: Vegetable and fruit production value from 2016 to 2024 in thousand R\$/year.

Thousand R\$	2016	2017	2018	2019	2020	2021	2022	2023	2024
Garlic	1,280,091	995,756	898,666	1,249,310	1,632,326	1,849,686	1,903,891	2,131,302	2,417,311
Potatoes	5,880,194	2,979,161	3,174,946	5,453,382	5,461,742	5,483,747	6,813,204	8,170,099	12,050,657
Onions	1,852,659	1,422,217	1,639,519	2,230,364	2,556,826	2,487,115	4,093,531	4,074,302	3,864,231
Tomatoes	5,475,851	4,354,465	4,918,702	5,666,999	6,078,903	6,479,154	8,663,425	10,592,486	9,918,958
Vegetables total	14,488,795	9,751,599	10,631,833	14,600,055	15,729,797	16,299,702	21,474,051	24,968,189	28,251,157
Banana	8,123,040	7,929,838	6,946,046	7,545,369	8,568,577	9,993,648	12,127,937	13,948,838	16,062,591
Lime	1,273,656	1,233,572	1,560,222	1,575,160	1,758,939	1,495,226	2,063,208	2,439,873	2,551,158
Apple	1,667,655	1,625,769	1,380,092	1,828,411	1,728,864	2,340,323	1,975,266	2,931,988	3,161,544
Papaya	1,388,767	929,548	931,540	1,085,434	1,112,835	1,426,079	2,268,057	2,484,106	2,148,444
Mangoes	944,859	999,643	1,336,090	1,645,906	1,805,947	1,953,114	2,122,332	3,231,963	3,626,601
Watermelon	1,347,431	1,344,457	1,327,223	1,545,615	1,769,264	1,844,638	1,875,180	2,227,285	2,425,469
Melon	597,724	494,709	587,296	580,867	641,016	628,352	867,912	1,261,058	1,387,617
Grape	2,391,852	3,195,482	3,028,712	3,359,214	3,627,429	4,266,464	4,533,446	5,611,355	8,335,241
Fruit total	17,734,984	17,753,018	17,097,221	19,165,976	21,012,871	23,947,844	27,833,338	34,136,466	39,698,665
Total	32,223,779	27,504,617	27,729,054	33,766,031	36,742,668	40,247,546	49,307,389	59,104,655	67,949,822

Source: IBGE PAM

IMPORTS AND EXPORTS UPDATE

VEGETABLES

Considering the same 10 products in the previous study, we noticed a growth in the volume of exports of, approximately, 10% between 2020 and 2025 (Table 7). However, analyzing the products individually, we see large variations as is the case for processed or preserved tomatoes with a drop of -99% and for processed or conserved potatoes with an increase of 2037.4%.

Table 7: Exported vegetable quantity from 2016 to 2025 in tons/year.

Exported Products (ton/year)	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	%
Ginger	8,847.3	5,638.7	15,326.3	22,095.1	31,712.8	41,870.7	34,440.1	32,258.1	42,812.4	47,448.9	49.6%
Onions	21,816.2	12,278.5	21,752.5	10,959.2	28,311.4	7,972.4	20,664.6	4,767.4	37,084.7	21,460.9	-24.2%
Prepared or preserved potatoes	123.1	1,094.1	423.5	329.4	998.5	4,133.9	8,897.5	15,521.8	16,046.1	21,341.4	2037.4%
Sweet potatoes	20,236.7	3,905.2	9,714.5	8,797.4	11,910.8	6,869.7	9,436.3	13,347.6	16,908.8	15,159.0	27.3%
Prepared sweet corn	13,268.3	17,127.8	17,581.4	16,292.3	18,348.7	24,073.8	21,160.1	17,289.5	14,151.4	11,834.0	-35.5%
Potatoes	2,475.5	21,031.6	12,903.4	2,466.3	9,056.6	6,417.4	4,115.7	12,961.2	9,657.7	10,825.4	19.5%
Carrots and turnips	12,126.2	4,143.2	619.9	901.8	12,805.5	1,220.7	685.8	1,308.7	11,941.2	2,223.8	-82.6%
Garlic	1.3	8.0	22.5	54.3	721.0	157.3	511.0	99.8	205.7	360.9	-49.9%
Cassava	23.7	36.4	45.8	101.8	176.1	195.8	328.2	215.6	228.4	275.1	56.2%
Prepared or preserved tomatoes	2,430.5	2,034.8	2,331.5	2,525.0	4,968.4	2,187.6	749.3	49.6	40.6	40.5	-99.2%
Totals	81,348.8	67,298.2	80,721.3	64,522.7	119,009.6	95,099.3	100,988.4	97,819.4	149,076.9	130,969.8	10.0%

Source: AGROSTAT MAPA

The value of these above products grew much more than in quantity during last 5 years as showed in Table 8.

Table 8: Exported vegetable amount from 2016 to 2025 in thousand US\$/year.

Exported products (thousand US\$/year)	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	%
Ginger	6,987	7,879	16,004	22,164	50,250	49,705	33,063	66,087	71,137	63,528	26.4%
Processed or preserved potatoes	602	5,010	1,815	1,269	2,047	4,586	8,912	21,316	23,431	31,030	1415.7%
Preserved sweet corn	12,028	15,917	16,292	13,888	15,819	22,336	24,971	23,482	20,044	15,034	-5.0%
Sweet potatoes	7,288	2,697	3,703	4,499	6,234	5,862	6,525	9,477	12,134	12,790	105.2%
Onions	4,924	2,288	3,417	1,954	7,148	2,007	12,044	2,033	22,751	3,941	-44.9%
Potatoes	794	5,296	1,844	602	2,968	2,007	2,003	6,376	5,004	3,763	26.8%
Garlic	5	58	77	241	2,077	571	518	466	1,084	1,569	-24.5%
Carrot and turnips	4,021	1,130	193	401	4,459	451	484	1,005	5,177	1,017	-77.2%
Cassava	23	42	54	146	188	195	412	262	309	360	91.5%
Processed or preserved tomatoes	2,607	2,705	2,422	2,840	4,900	2,181	921	137	130	131	-97.3%
Totals	39,280	43,022	45,822	48,005	96,091	89,900	89,854	130,641	161,200	133,163	38.6%

Source: AGROSTAT MAPA

Vegetables as ginger and preserved sweet corn has had an important growth in recent years (Figure 4).

Figure 4: Exported vegetable amount from 2016 to 2025 in thousand US\$/year.



Source: AGROSTAT MAPA

In Table 9 and 10 are presented other imported exported products such as dried pepper, mate, cassava starch, both in quantities and values traded annually standing out for pepper, mate and cassava starch.

Table 9: Other exported vegetable quantity from 2016 to 2025 in tons/year.

Exported Products (ton/year)	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	%
Dried, crushed, or powdered piper pepper	31,085	59,501	72,580	84,676	89,756	92,065	86,359	80,702	61,665	83,027	-7.5%
Mate	35,325	33,625	36,164	36,189	49,692	55,212	48,062	41,239	49,182	48,043	-3.3%
Cassava starch	13,382	4,414	4,576	6,539	13,561	40,986	43,638	23,413	35,643	40,610	199.5%
Yams	1,577	1,758	2,131	5,625	6,595	7,189	6,887	6,904	7,644	8,314	26.1%
Tapioca and its substitutes	2,016	1,861	2,385	2,190	3,118	3,071	3,261	3,896	5,883	5,383	72.6%
Tomatoes	4,755	6,412	28,864	850	4,001	1,244	580	1,512	8,790	3,566	-10.9%
Potato starch	-	0	1	169	660	290	236	551	705	1,528	131.5%
Bell peppers and peppers	66	1	118	592	336	280	369	341	528	716	113.4%
Extracts, essences and preparations of teas and mate	68	64	109	82	129	261	394	256	403	543	320.5%
Potato flour	81	106	7	177	438	707	207	208	479	448	2.3%
Prepared or preserved cucumbers	144	143	144	239	344	426	302	341	458	436	26.9%
Prepared or preserved olives	262	267	285	190	384	263	206	344	368	335	-12.7%
Mushrooms	1	1	5	20	24	44	24	29	32	35	43.2%
Frozen spinach	0	-	6	23	25	21	17	27	30	29	17.8%
Totals	88,762	108,153	147,376	137,561	169,063	202,059	190,542	159,764	171,808	193,014	14.2%

Source: AGROSTAT MAPA

Table 10: Other exported vegetable amount from 2016 to 2025 in thousand US\$/year.

Exported products (thousand US\$/year)	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	%
Dried, crushed, or powdered piper pepper	246,956	274,437	194,999	179,600	185,322	306,301	309,213	252,189	285,940	517,815	179.4%
Mate	82,355	78,831	84,942	80,495	87,428	97,581	96,175	89,034	102,676	100,355	14.8%
Cassava starch	8,069	4,759	4,929	6,329	10,209	25,851	35,112	23,935	27,336	26,749	162.0%
Extracts, essences and preparations of teas and mate	271	290	516	1,062	1,544	5,200	11,617	7,721	12,929	18,286	1084.6%
Yams	2,174	2,304	2,355	6,242	6,180	7,224	7,219	10,176	10,681	9,377	51.7%
Tapioca and its substitutes	2,874	3,056	3,891	3,503	4,616	4,669	5,279	6,562	8,751	7,944	72.1%
Tomatoes	2,186	2,144	2,329	596	1,496	946	751	1,555	5,577	2,336	56.1%
Potato starch	-	1	5	145	410	177	272	921	697	1,507	267.3%
Bell peppers and peppers	91	3	151	989	489	505	708	937	1,077	1,200	145.6%
Potato flour	134	149	17	241	410	783	284	742	1,586	953	132.8%
Prepared or preserved cucumbers	318	368	362	524	518	695	629	908	1,038	948	82.8%
Prepared or preserved olives	623	627	556	478	671	546	561	825	974	935	39.3%
Mushrooms	125	88	85	145	202	213	130	248	280	254	25.9%
Frozen spinach	1	-	10	52	52	44	45	77	93	89	70.9%
Totals	346,175	367,056	295,146	280,400	299,547	450,737	467,993	395,829	459,636	688,749	129.9%

Source: AGROSTAT MAPA

The quantities imported of the products mentioned in the previous study are presented in Table 11 with a reduction of 15.8% between last 5 years.

Table 11: Imported vegetable quantity from 2016 to 2025 in tons/year.

Imported products (ton/year)	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	%
Garlic	348,582	351,647	335,757	342,450	373,253	393,828	365,878	263,044	324,337	345,699	-7.4%
Potatoes	173,044	159,257	164,825	165,446	193,511	125,693	119,665	115,040	145,570	173,705	-10.2%
Prepared or preserved potatoes	178,079	64,698	117,892	211,523	197,757	116,963	150,524	134,109	257,430	137,835	-30.3%
Onions	36,138	49,636	47,967	46,272	40,236	46,403	23,913	16,617	16,927	17,213	-57.2%
Dried onions	5,079	5,962	7,068	7,136	9,282	10,276	10,480	12,877	15,510	15,004	61.6%
Carrots and turnips	45,102	8,192	20	21,104	7,512	80	9,159	8,366	14,980	2,182	-71.0%
Ginger	595	598	274	491	760	378	404	426	537	966	27.0%
Cassava	464	363	212	235	417	262	314	162	236	269	-35.6%
Prepared sweet corn	324	383	410	440	143	98	66	89	298	36	-74.9%
Tomatoes, prepared or preserved	15,708	1,322	1,320	2,642	426	-	-	-	-	-	-100.0%
Totals	803,115	642,059	675,744	797,740	823,297	693,980	680,403	550,730	775,824	692,908	-15.8%

Source: AGROSTAT MAPA

The quantity in tons/year imported of the other product list is presented in Table 12 with low variation.

Table 12: Other imported vegetable quantity from 2016 to 2025 in tons/year.

Imported products (ton/year)	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	%
Azeitonas preparadas ou conservadas	106,130	113,810	114,333	121,525	137,700	114,346	122,114	122,006	128,365	121,618	-11.7%
Cogumelos	9,741	8,085	6,244	8,181	5,978	8,170	10,699	12,897	18,300	19,978	234.2%
Espinafres congelados	2,009	2,866	2,383	3,375	2,586	2,742	2,847	3,525	3,943	3,521	36.2%
Extratos, essências e preparações de chás e mate	135	250	138	65	370	222	270	1,676	1,785	2,579	596.5%
Farinha de batata	1,374	1,615	1,654	1,714	1,458	1,889	1,936	2,026	1,970	1,969	35.1%
Fécula de batata	1,278	1,036	1,115	1,104	1,017	1,069	1,227	1,297	1,135	1,192	17.3%
Fécula de mandioca	599	663	661	452	565	627	506	437	862	924	63.4%
Inhame	460	365	262	230	151	189	251	872	371	277	83.7%
Mate	11,175	14,133	9,507	1,195	555	4	3	1,415	2,989	157	-71.7%
Pepinos preparados ou conservados	6	15	8	22	20	25	37	16	40	28	38.8%
Pimenta piper seca, triturada ou em pó	4	0	0	0	0	0	0	44	0	1	450.5%
Pimentões e pimentas	-	0	0	-	0	0	-	-	-	-	-100.0%
Tapioca e seus sucedâneos	17	-	1	-	0	692	-	131	0	-	-100.0%
Tomates	43	62	686	890	293	329	431	182	46	-	-100.0%
Totals	132,969	142,900	136,993	138,753	150,693	130,304	140,322	146,524	159,806	152,244	1.0%

Source: AGROSTAT MAPA

In terms of amount imported for the 10 products cited in previous report there was an increase of 16% from 2020 to 2025 (Table 13).

Table 13: Imported vegetable amount from 2016 to 2025 in thousand US\$/year.

Imported products (thousand US\$/year)	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	%
Prepared or preserved potatoes	332,043	341,976	316,323	327,582	287,931	296,457	356,753	360,495	449,032	446,871	55.2%
Garlic	328,516	287,528	172,582	225,095	274,948	166,108	143,774	117,420	187,503	244,878	-10.9%
Dried onions	10,103	10,423	10,869	12,414	18,155	19,478	19,865	23,465	31,334	27,186	49.7%
Onions	60,037	14,959	33,921	52,475	42,292	27,248	40,911	30,808	84,407	24,843	-41.3%
Tomatoes, prepared or preserved	28,680	39,803	37,854	35,450	33,245	42,724	22,299	20,787	19,985	18,933	-43.1%
Ginger	642	786	678	817	1,664	1,042	957	823	1,709	2,730	64.1%
Prepared sweet corn	769	593	375	404	715	496	521	354	577	634	-11.3%
Potatoes	15,551	2,198	4	5,490	1,684	12	1,082	1,217	3,090	335	-80.1%
Carrots and turnips	544	711	798	831	343	273	72	76	102	115	-66.4%
Cassava	849	131	79	120	18	-	-	-	-	-	-100.0%
Totals	777,734	699,109	573,482	660,678	660,994	553,838	586,234	555,444	777,739	766,525	16.0%

Source: AGROSTAT MAPA

For the same period and enlarging the list to the other products mentioned before we have an import value grow of 72% between 2020 and 2025 (Table 14).

Table 14: Other imported vegetable amount from 2016 to 2025 in thousand US\$/year.

Imported products (thousand US\$/year)	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	%
Prepared or preserved olives	115,513	110,260	102,382	107,289	113,980	106,338	120,272	112,231	152,946	168,338	47.7%
Potato flour	12,280	10,561	8,097	11,334	7,381	10,160	14,656	26,086	37,840	41,785	466.1%
Extracts, essences and preparations of teas and mate	9,245	11,105	9,741	4,928	5,332	5,982	4,835	3,296	5,365	6,398	20.0%
Cucumbers, prepared or preserved	1,863	2,598	2,261	3,308	2,816	2,954	3,462	4,106	5,197	4,649	65.1%
Mate	214	309	374	293	834	574	656	2,541	2,872	3,929	370.9%
Potato starch	1,090	1,250	1,254	1,579	1,234	1,282	1,564	2,121	2,403	2,276	84.4%
Dried, crushed, or powdered piper pepper	3,113	2,579	1,239	944	733	930	1,267	1,970	1,554	2,215	202.2%
Frozen spinach	1,089	922	1,016	967	924	995	1,100	1,277	1,169	1,297	40.3%
Mushrooms	151	89	133	173	137	104	138	69	82	212	54.2%
Cassava starch	3,704	7,121	4,493	1,068	496	16	44	784	1,537	158	-68.1%
Tapioca and its substitutes	9	15	8	21	21	28	44	14	54	34	59.9%
Yam	-	0	0	-	0	0	-	-	-	-	-100.0%
Bell peppers and peppers	30	-	2	-	0	286	-	77	1	-	-100.0%
Tomatoes	19	66	558	725	221	124	152	73	42	-	-100.0%
Totals	148,319	146,875	131,557	132,629	134,111	129,772	148,189	154,646	211,060	231,291	72.5%

Source: AGROSTAT MAPA

The quantity ratio of exports compared to imports of the products mentioned in the previous report increased from 14.5% to 18.9% in the period from 2020 to 2025. During last decade, exports increased by 61% and imports reduced in 14% (Table 15).

Table 15: Vegetable exported X imported quantities from 2016 to 2025 in tons/year.

Previous report	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	%
Exp (ton/year)	81,349	67,298	80,721	64,523	119,010	95,099	100,988	97,819	149,077	130,970	61%
Imp (ton/year)	803,115	642,059	675,744	797,740	823,297	693,980	680,403	550,730	775,824	692,908	-14%
% (Exp/Imp)	10.1%	10.5%	11.9%	8.1%	14.5%	13.7%	14.8%	17.8%	19.2%	18.9%	

Source: AGROSTAT MAPA

The amount ratio of exported X imported products increase by same order up to 17.4% in the last 5 years. (Table 16). And exported amount increased by 239% from 2016 to 2025.

Table 16: Vegetable exported X imported amount from 2016 to 2025 in thousand US\$/year.

Previous report	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	%
Exp (thousand US\$/year)	39,280	43,022	45,822	48,005	96,091	89,900	89,854	130,641	161,200	133,163	239%
Imp (thousand US\$/year)	777,734	699,109	573,482	660,678	660,994	553,838	586,234	555,444	777,739	766,525	-1%
% (Exp/Imp)	5.1%	6.2%	8.0%	7.3%	14.5%	16.2%	15.3%	23.5%	20.7%	17.4%	

Source: AGROSTAT MAPA

Considering the enlarged list (previous report and other products) the amount exported X imported ratio increased from 29.6% up to 38.3% between 2020 and 2025 (Table 17). In fact, exports increased by 90% in the last decade.

Table 17: Other vegetable exported X imported quantities from 2016 to 2025 in tons/year.

Expanded list	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	%
Exp (ton/year)	170,111	175,451	228,098	202,084	288,073	297,158	291,531	257,584	320,885	323,984	90%
Imp (ton/year)	936,084	784,959	812,736	936,493	973,990	824,284	820,725	697,253	935,630	845,152	-10%
% (Exp/Imp)	18.2%	22.4%	28.1%	21.6%	29.6%	36.1%	35.5%	36.9%	34.3%	38.3%	

Source: AGROSTAT MAPA

The ratio value of the exported X imported of enlarged list grew from 49.8% up to 82.4% between 2016 and 2025. Exports increased by 113% during last decade (Table 18).

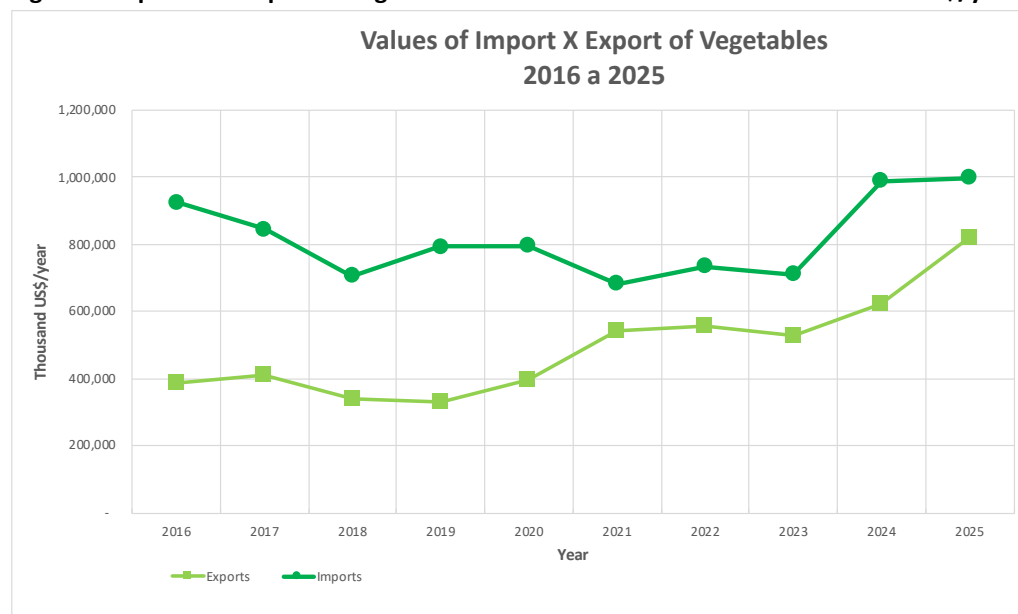
Table 18: Other vegetable exported X imported amount from 2016 to 2025 in thousand US\$/year.

Expanded list	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	%
Exp (thousand US\$/year)	385,455	410,078	340,968	328,405	395,639	540,638	557,846	526,470	620,837	821,911	113%
Imp (thousand US\$/year)	926,053	845,984	705,039	793,307	795,105	683,611	734,423	710,090	988,799	997,817	8%
% (Exp/Imp)	41.6%	48.5%	48.4%	41.4%	49.8%	79.1%	76.0%	74.1%	62.8%	82.4%	

Source: AGROSTAT MAPA

Above numbers indicate an increase export growth trend in this sector with opportunities of new products not mentioned in the previous report (Figure 5).

Figure 5: Exported X imported vegetables amount from 2016 to 2025 in thousand US\$/year.



Source: AGROSTAT MAPA

FRUITS

Brazil is a major producer and exporter of fruits. In 2025, Brazil exported more than 1 million tons of fruit, accounting for only the 13 most exported fruits (over 100 tons/year). The productions of mangoes, melons and grapes in the Brazilian Northeast stand out, which use developed fertirrigation and plasticulture technologies. In the last 10 years the export of these products raised by 68.9% (Table 19).

Table 19: Exported fruit quantities from 2016 to 2025 in tons/year.

Exported product (ton/year)	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	%
Fresh or dried mangoes	154,211	179,601	170,463	215,834	243,226	272,560	231,364	266,098	258,305	290,841	88.6%
Fresh melons	224,688	233,653	197,617	251,639	236,259	257,903	222,355	228,167	243,399	283,359	26.1%
Fresh or dried lemons and limes	95,748	92,393	97,502	104,618	119,428	144,944	156,253	166,618	175,822	203,704	112.8%
Fresh watermelon	67,431	73,852	67,667	102,987	107,847	118,010	105,689	114,227	132,556	185,553	175.2%
Fresh or dried bananas	64,361	41,397	65,527	79,951	84,304	108,753	84,365	56,261	48,848	80,318	24.8%
Fresh grapes	30,813	44,493	39,842	45,054	49,228	76,609	52,561	73,212	58,858	62,167	101.8%
Fresh papayas	37,918	39,118	42,671	44,239	43,709	50,291	39,834	37,852	43,986	55,163	45.5%
Fresh or dried avocados	4,951	7,835	7,564	10,246	7,565	8,532	10,750	26,165	24,623	24,984	404.7%
Fresh apples	30,646	55,437	70,997	56,465	62,564	99,048	35,052	35,980	10,093	13,792	-55.0%
Fresh fig	1,191	1,307	1,396	1,386	1,184	1,567	1,565	1,819	1,609	1,703	42.9%
Fresh or dried coconuts	1,108	1,485	915	774	787	799	486	401	807	1,107	0.0%
Fresh or dried guavas	172	143	167	198	238	451	504	474	590	1,081	528.2%
Fresh khakis	88	301	203	282	138	912	767	508	460	900	921.4%
Totals	713,326	771,013	762,530	913,673	956,476	1,140,380	941,545	1,007,782	999,953	1,204,673	68.9%

Source: AGROSTAT MAPA

It is interesting note that the amount exported of fruits represents a small quantity of the national production (Table 3) as we can show for banana (1.1%), lime (11.9%), papaya (4.8%), mangoes (15.8%), watermelon (9.4%), melons (34.7%) and only 3.4% for grapes. In 2025, the volume of the 13 most imported fruits (Table 20) represented 42.7% of exported, where temperate climate fruits such as apples and pears stand out.

Fresh fruit exports represent US\$ 1.2 billons per year (Table 21) driven by mangoes, melons, limes, grapes and watermelon with a growth of 101.4% over last 10 years highlighted in Figure 6 below.

Table 20: Imported fruit quantities from 2016 to 2025 in tons/year.

Imported product (ton/year)	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	%
Fresh apples	155,479	78,475	75,121	78,459	107,320	50,978	129,986	153,707	235,120	213,628	37.4%
fresh pear	146,778	156,186	158,077	153,489	138,418	120,781	133,019	158,620	169,224	165,836	13.0%
Fresh or dried oranges	18,886	18,234	22,056	30,656	22,145	23,693	26,357	26,982	51,264	49,110	160.0%
fresh Kiwis	29,966	26,406	27,876	30,108	27,083	24,822	32,994	31,957	41,526	42,874	43.1%
Fresh or dried coconuts	17,261	17,731	15,182	15,755	13,909	8,541	10,409	11,579	13,145	12,513	-27.5%
Fresh grapes	27,780	24,197	19,100	14,525	7,251	5,321	7,750	7,632	8,909	8,891	-68.0%
Fresh peaches	11,404	9,219	10,581	11,597	7,918	6,329	6,110	7,300	8,901	6,821	-40.2%
fresh cherry	2,514	3,404	2,736	3,131	2,342	2,771	3,793	4,321	4,759	5,891	134.3%
Fresh or dried lemons and limes	1,442	2,897	3,232	4,025	2,386	3,014	2,346	2,099	4,080	3,948	173.7%
Fresh or dried mandarins, mandarins and satsumas	9,117	1,416	918	1,670	695	2,263	1,288	2,239	4,701	3,692	-59.5%
Fresh khakis	1,641	2,107	1,417	2,236	1,428	1,006	287	856	571	985	-40.0%
Fresh or dried bananas	37	55	177	61	79	44	37	53	325	617	1564.9%
Fresh or dried avocados	215	467	490	593	326	266	437	190	1,022	130	-39.5%
Totals	422,522	340,795	336,965	346,304	331,301	249,828	354,812	407,535	543,546	514,938	21.9%

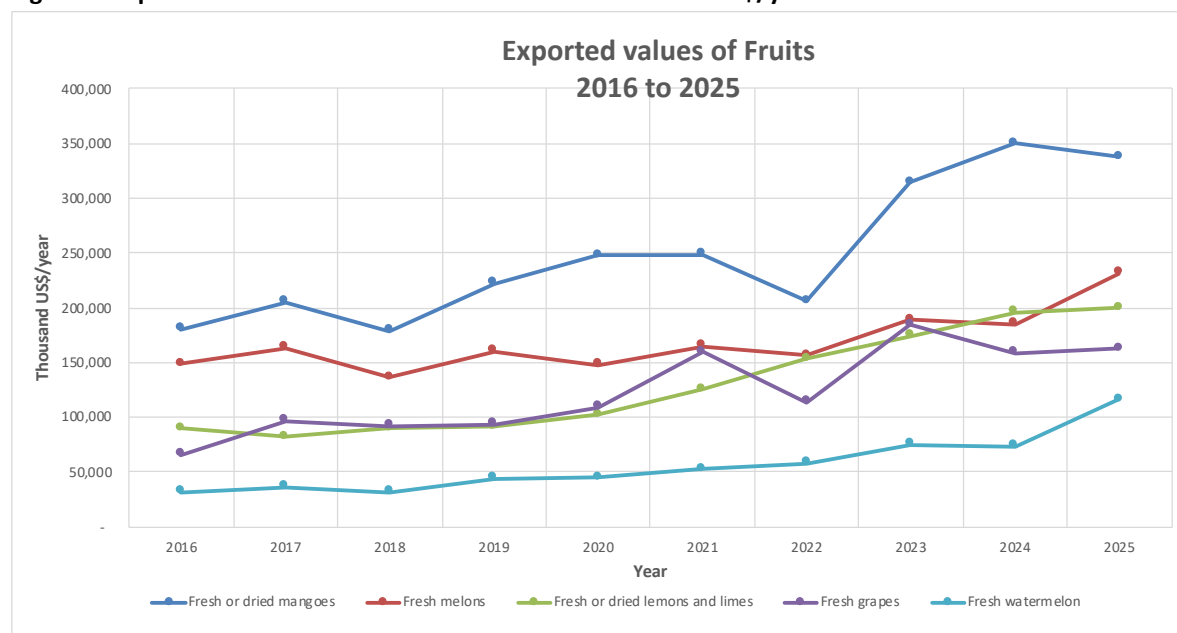
Source: AGROSTAT MAPA

Table 21: Exported fruit amount from 2016 to 2025 in thousand US\$/year.

Exported product (thousand US\$/year)	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	%
Fresh or dried mangoes	179,932	205,111	178,822	221,801	247,417	248,739	205,917	314,475	350,337	337,440	87.5%
Fresh melons	148,742	162,916	136,013	160,308	147,935	165,079	156,381	189,097	185,245	231,451	55.6%
Fresh or dried lemons and limes	89,932	82,089	89,543	90,923	102,195	125,131	153,040	174,036	196,158	199,480	121.8%
Fresh grapes	65,255	96,207	91,842	93,433	108,992	159,567	113,921	184,389	158,760	162,493	149.0%
Fresh watermelon	31,487	36,336	31,722	43,858	44,366	52,732	57,562	74,553	73,575	115,642	267.3%
Fresh papayas	43,069	41,350	50,063	47,270	42,608	50,694	49,647	53,052	58,049	74,844	73.8%
Fresh or dried avocados	6,807	10,890	16,379	19,520	13,213	14,928	17,061	39,025	36,229	48,660	614.8%
Fresh or dried bananas	21,036	11,635	20,508	24,559	26,112	37,113	37,329	25,155	21,736	32,575	54.9%
Fresh apples	18,153	41,884	52,472	42,455	41,271	73,803	24,494	30,493	9,598	14,723	-18.9%
Fresh fig	6,304	6,608	6,946	6,709	4,838	6,953	6,345	8,602	7,921	8,964	42.2%
Fresh or dried pineapples	1,598	2,004	700	1,010	2,334	3,114	3,380	2,212	2,972	2,663	66.7%
Fresh or dried guavas	399	344	402	437	537	1,012	1,181	1,206	1,573	2,638	561.5%
Fresh or dried coconuts	566	1,091	680	832	777	1,017	671	469	998	2,002	253.5%
Fresh khakis	245	627	544	671	239	1,067	1,464	843	995	1,826	644.7%
Totals	613,527	699,093	676,638	753,787	782,836	940,949	828,392	1,097,607	1,104,145	1,235,401	101.4%

Source: AGROSTAT MAPA

Figure 6: Exported fruit amount from 2016 to 2025 in thousand US\$/year.



Source: AGROSTAT MAPA

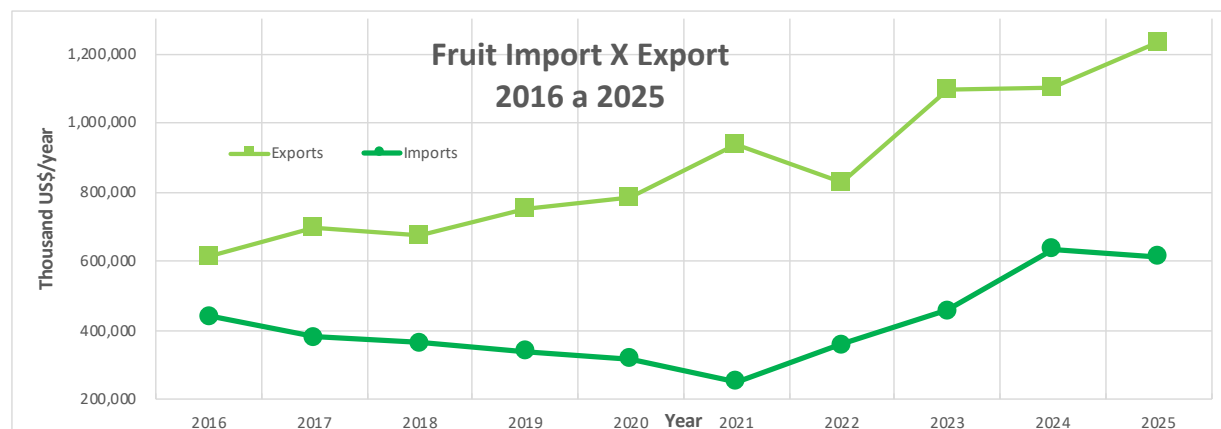
In 2025, imported fruit amount (Table 22) represented almost of half value exported in the same year (Figure 7).

Table 22: Imported fruit amount from 2016 to 2025 in thousand US\$/year.

Imported product (thousand US\$/year)	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	%
Fresh apples	139,893	75,330	69,735	68,225	90,946	48,903	118,959	165,057	263,330	233,217	66.7%
Fresh Pears	142,966	151,005	143,525	125,835	105,970	92,836	114,445	140,433	164,203	158,879	11.1%
Fresh kiwis	32,956	39,587	42,224	43,510	46,786	46,204	53,570	63,706	89,767	98,740	199.6%
fresh or dried oranges	14,646	15,084	19,281	22,794	18,952	18,696	18,884	23,598	40,128	37,537	156.3%
Fresh cherry	12,338	13,834	11,943	14,765	11,601	11,247	14,434	20,506	20,277	24,768	100.7%
fresh or dried coconuts	26,814	28,643	27,129	20,349	17,118	13,200	15,240	14,357	15,774	20,457	-23.7%
fresh grapes	45,838	39,144	30,489	22,113	10,434	7,253	11,651	12,899	19,114	16,443	-64.1%
fresh peaches	13,688	11,016	13,503	13,297	10,203	8,332	8,811	10,572	13,311	11,106	-18.9%
fresh or dried mandarins, mandarins and sa	7,552	994	703	1,173	685	1,723	1,011	2,186	4,794	4,136	-45.2%
fresh or dried lemons and limes	1,898	3,122	3,580	4,037	2,340	2,417	1,726	1,566	3,704	3,807	100.6%
fresh khakis	2,087	2,645	2,032	2,937	2,038	1,391	593	1,641	1,210	2,209	5.9%
fresh or dried bananas	152	176	530	176	190	138	120	129	553	1,225	707.4%
Totals	440,828	380,579	364,673	339,213	317,262	252,338	359,446	456,650	636,165	612,524	38.9%

Source: AGROSTAT MAPA

Figure 7: Imported fruit amount from 2016 to 2025 in thousand US\$/year.



FLOWERS

The flower and ornamental plants sector in Brazil have doubled its revenue in the last seven years, jumping from 10 billion reais earned in the Brazilian domestic market in 2017, to approximately 21,2 billion reais in 2024 (CEPEA IBRAFLO, 2024). Nonetheless, Brazil's ornamental exports during the last 10 years have increased by only 12% (Table 23).

Table 23: Exported ornamentals amount from 2016 to 2025 in thousand US\$/year.

Exported product (thousand US\$/year)	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	%
Bulbs, tubers, rhizomes and the like	5,964	5,824	5,215	4,949	5,112	5,539	4,397	5,849	4,346	4,063	-32%
Fresh cut flowers	152	224	179	163	767	439	119	210	80	111	-27%
Foliage, leaves and branches of fresh cut plants	1,049	1,262	1,348	1,622	1,810	2,839	2,330	2,065	1,590	2,288	118%
Seedlings of non-ornamental plants	983	795	420	174	541	289	84	89	17	419	-57%
Ornamental plant seedlings	4,454	4,158	4,728	3,631	3,823	6,727	5,056	4,934	5,334	5,805	30%
Other living plants, cuttings and grafts	555	443	612	949	637	1,115	915	1,167	1,704	1,910	244%
Ornamental plants	-	-	33	34	55	85	98	94	103	105	222%
Totals	13,156	12,706	12,534	11,522	12,745	17,032	13,001	14,407	13,174	14,701	12%

Source: AGROSTAT MAPA

However, imports almost doubled in this same 10-year period, driven by the growth of the domestic market, preferably (Table 24). Brazil has a deficit in the value of exports from the ornamental sector. In 2025, exports accounted for only 24.1% of imports in 2025.

Table 24: Imported ornamentals amount from 2016 to 2025 in thousand US\$/year.

Imported product (thousand US\$/year)	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	%
Bulbs, tubers, rhizomes and the like	5,811	6,633	6,008	7,404	4,566	3,190	4,096	5,275	5,261	6,671	15%
Fresh cut flowers	6,539	6,931	5,945	5,241	1,683	1,804	2,124	2,695	3,738	6,911	6%
Foliage, leaves and branches of fresh cut plants	86	49	57	70	77	45	33	34	57	78	-9%
Seedlings of non-ornamental plants	6,470	8,052	8,278	9,101	10,026	11,024	7,927	9,875	13,394	15,092	133%
Ornamental plant seedlings	12,750	18,851	25,101	24,765	21,498	24,540	25,783	26,439	30,888	32,065	151%
Other living plants, cuttings and grafts	22	0	5	10	90	2	0	22	127	143	545%
Totals	31,679	40,516	45,394	46,591	37,939	40,604	39,963	44,340	53,465	60,961	92%

Source: AGROSTAT MAPA

In terms of quantities, exports and imports have remained relatively extendable in the last 10 years (Tables 25 and 26). Exports account for 83.1% of Brazil's imports in this sector (Figure 8).

Table 25: Exported ornamentals quantities from 2016 to 2025 in tons/year.

Exported product (ton/year)	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	%
Ornamental plant seedlings	288	179	488	480	395	534	894	888	1,143	1,554	439%
Bulbs, tubers, rhizomes and the like	2,862	2,456	2,225	2,299	2,295	2,080	1,591	1,912	1,299	1,416	-51%
Other living plants, cuttings and grafts	228	142	100	189	271	537	292	338	505	478	109%
Foliage, leaves and branches of fresh cut plants	303	268	262	263	203	336	274	248	189	243	-20%
Seedlings of non-ornamental plants	323	575	151	35	269	424	28	1	7	176	-46%
Ornamental plants			13	13	23	24	34	28	40	62	378%
Fresh cut flowers	40	42	25	19	69	71	18	13	14	11	-73%
Totals	4,045	3,663	3,264	3,298	3,525	4,005	3,132	3,429	3,197	3,941	-3%

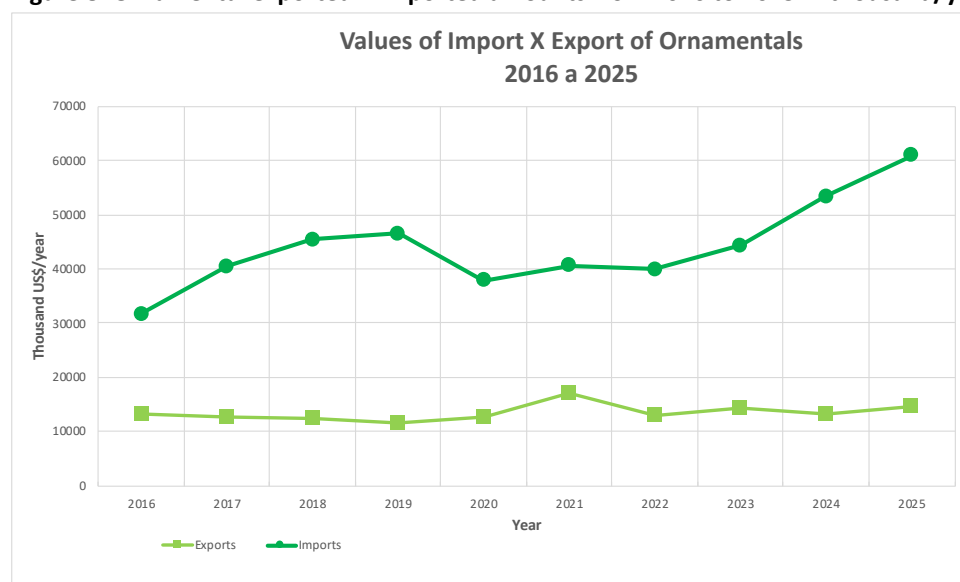
Source: AGROSTAT MAPA

Table 26: Imported ornamentals quantities from 2016 to 2025 in tons/year.

Imported product (ton/year)	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	0%
Bulbs, tubers, rhizomes and the like	2,154	2,262	1,831	2,150	1,319	777	979	1,146	1,081	1,290	-40%
Seedlings of non-ornamental plants	742	869	873	1,008	951	1,117	794	855	1,050	1,240	67%
Fresh cut flowers	1,393	1,451	1,204	1,030	326	335	392	504	672	1,221	-12%
Ornamental plant seedlings	345	670	890	924	836	893	862	964	1,005	972	182%
Foliage, leaves and branches of fresh cut plants	13	7	7	24	5	6	8	6	11	15	21%
Other living plants, cuttings and grafts	1	0	0	0	5	0	0	1	7	4	422%
Totals	4,647	5,258	4,805	5,136	3,441	3,128	3,036	3,475	3,825	4,742	2%

Source: AGROSTAT MAPA

Figure 8: Ornamental exported X imported amounts from 2016 to 2025 in thousand/year.



Source: AGROSTAT MAPA, EACEA

TOTAL EXPORT X IMPORT

Exports of vegetables, fruits and ornamentals represented approximately US\$ 2,1 billions in 2025, double value from 10 years before. Fruit exports is the most important sector representing 59.6% of the total exported followed by vegetables (39.7%) and ornamentals (0.7%) (Table 27).

Table 27: Exported vegetable, fruit and ornamental amount from 2016 to 2025 in thousand US\$/year.

Exported product (thousand US\$/year)	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	%
Vegetable	385,455	410,078	340,968	328,405	395,639	540,638	557,846	526,470	620,837	821,911	39.7%
Fruits	613,527	699,093	676,638	753,787	782,836	940,949	828,392	1,097,607	1,104,145	1,235,401	59.6%
Ornamentals	13,156	12,706	12,534	11,522	12,745	17,032	13,001	14,407	13,174	14,701	0.7%
Totals	1,012,138	1,121,877	1,030,141	1,093,713	1,191,220	1,498,619	1,399,239	1,638,484	1,738,156	2,072,013	100.0%

Source: AGROSTAT MAPA

Imports of vegetables, fruits and ornamentals represented approximately US\$ 1.7 billions in 2025, representing an increase of 20% from 10 years before. Vegetables imports is the most important sector representing 59.7% of the total imported followed by fruits (36.6%) and ornamentals (3.6%) as showed in Table 28 and Figure 9.

Table 28: Imported vegetable, fruit and ornamental amount from 2016 to 2025 in thousand US\$/year.

Imported product (thousand US\$/year)	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	%
Vegetable	926,053	845,984	705,039	793,307	795,105	683,611	734,423	710,090	988,799	997,817	59.7%
Fruits	440,828	380,579	364,673	339,213	317,262	252,338	359,446	456,650	636,165	612,524	36.6%
Ornamentals	31,679	40,516	45,394	46,591	37,939	40,604	39,963	44,340	53,465	60,961	3.6%
Totals	1,398,560	1,267,079	1,115,106	1,179,111	1,150,306	976,553	1,133,831	1,211,080	1,678,430	1,671,302	100.0%

Source: AGROSTAT MAPA

Figure 9: Imported x Exported vegetable, fruit and ornamental amount from 2016 to 2025 in thousand US\$/year.



Source: AGROSTAT MAPA

MAJOR VEGETABLES UPDATE

LETTUCE

Table 29: Area (hectare), quantity (tons) and amount (thousand R\$) of lettuce in Brazil from 2016 to 2025⁴

Lettuce	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Hectars	91,172	80,274	73,177	74,113	69,244	27,178	24,919	23,791	24,490	24,185
Thousand R\$	-	1,204,557	-	-	-	-	-	796,024	468,699	-
Thousand Tons	-	672	-	-	1,504	-	-	227	135	-
R\$/kg		1.79						3.51	3.48	

Source: Ibrahort (2020), HF Brasil (2025)

To mitigate the impacts of climate variations on the fields, producers have intensified investments in protected cultivation, which has contributed to maintaining supply throughout the year. However, in view of the losses in 2025, the prospects for 2026 are for a reduction in investments, to avoid surpluses and provide a recovery in prices. In 2024, the planted area in the relevant regions reduced by 6.6% compared to 2020 (Table 29).

Table 30: Planted center areas of lettuce in Brazil center regions from 2020 to 2024 in hectares

Lettuce (ha)	2020		2021		2022		2023		2024		2025	2024	
Relevant regions	winter	summer	winter	summer	winter	summer	winter	summer	winter	summer	winter	Total	%
Teresopolis RJ	790	1,446	790	1,446	700	1,400	690	1,300	650	1,300	625	1,950	7.9%
Ibiuna SP	5,828	8,037	5,828	7,137	5,220	7,701	5,000	8,610	4,800	8,610	4,500	13,410	54.6%
Mogi das Cruzes SP	4,900	5,290	4,900	4,690	4,180	5,000	4,000	5,430	3,700	5,500	3,650	9,200	37.5%
Total	11,518	14,773	11,518	13,273	10,100	14,101	9,690	15,340	9,150	15,410	8,775	24,560	100.0%
%	43.8%	56.2%	46.5%	53.5%	41.7%	58.3%	38.7%	61.3%	37.3%	62.7%			

Source: Cepea, HF Brasil Estatísticas

Average prices from all regions from 2020 to 2026 show a 113% and 120% of increase for producer and wholesale respectively regardless the variety (table 31)

Table 31: Sale prices of lettuce in Brazil per center, market and variety from 2020 to 2026 in R\$/unit

R\$/unit	2020		2021		2022		2023		2024		2025		2026	
Regions / Market*	P	W	P	W	P	W	P	W	P	W	P	W	P	W
Curitiba (PR)									3.07					
Crispy									1.77					
Butterhead									1.30					
Ibiúna (SP)	1.86	2.55	3.71	1.50	4.51	4.26	2.50	3.54	4.31					
Iceberg	0.93	1.27	1.79	1.50	2.26	1.89	2.50	1.61	2.05					
Crispy	0.46	0.63	0.98	1.15	1.19	0.97	1.17							
Butterhead	0.47	0.64	0.95	1.10	1.18	0.97	1.10							
Mário Campos (MG)	2.58	2.67	1.08	3.43										
Iceberg	1.25	1.25	1.08	1.54										
Crispy	0.66	0.72	0.95											
Butterhead	0.66	0.71	0.95											
Mogi das Cruzes (SP)	2.45	3.08	3.41	5.19	5.19	4.52	5.16							
Iceberg	1.15	1.41	1.24	2.37	2.35	2.12	2.50							
Crispy	0.67	0.85	1.09	1.42	1.42	1.19	1.42							
Butterhead	0.63	0.82	1.08	1.41	1.42	1.21	1.24							
São Paulo (SP)	2.08	2.47	0.52	3.48	1.25	3.64	3.58	3.36	4.58					
Iceberg	0.94	1.05	1.44	1.52	1.50	1.44	1.44	2.18						
Crispy	0.57	0.69	0.52	1.02	1.25	1.03	0.97	1.25						
Butterhead	0.57	0.72	1.02	1.07	1.05	0.96	1.15							
Teresópolis (RJ)	1.68	1.94	1.50	2.44	2.89	2.71	2.76	4.23						
Iceberg	0.81	0.94	1.00	1.22	1.33	1.23	2.13							
Crispy	0.42	0.49	0.50	0.62	0.83	0.69	0.76	1.02						
Butterhead	0.44	0.50	0.62	0.84	0.69	0.78	1.08							

⁴ Data from 2021 to 2025 related to main center regions only

GARLIC

Garlic production in Brazil has advanced significantly in recent decades. Data from the IBGE (Table 32) indicates that national production went from 132 thousand tons in 2016 to 185 thousand tons in 2026, growth driven by significant productivity gains – which jumped from 9.67 t/ha to 13.99 t/ha in the period. This evolution is the result of continuous investments in research, innovation, and adoption of technologies. Monthly garlic prices increased from 2019 to 2025 by an average of 150% as per Table 33 below.

Table 32: Area (hectare), quantity (tons) and amount (thousand R\$) of garlic in Brazil from 2016 to 2025

Garlic	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Hectars	11,406	10,687	10,662	11,122	12,227	13,063	13,307	13,879	12,885	13,874
Thousand R\$	1,280,091	995,756	898,666	1,249,310	1,632,326	1,849,686	1,903,891	2,131,302	2,417,311	-
Thousand Tons	132	121	119	131	156	167	181	185	173	185
R\$/kg	9.67	8.24	7.56	9.54	10.48	11.07	10.50	11.53	13.99	-

Source: Cepea, HF Brasil Estatísticas

Table 33: sale prices of garlic in Brazil from 2019 to 2025 in R\$/kg

Garlic (R\$/kg)	Year				2019 - 2025
Month	2019	2020	2024	2025	%
Jan	6.50	11.50	19.84	24.92	283.4%
Feb	6.75	12.50	20.00	25.27	274.3%
Mar	7.00	13.50	25.02	26.53	279.0%
Apr	7.50	16.00	27.86	25.48	239.8%
Mai	8.00	17.00	26.67	25.69	221.1%
Jun	8.75	18.00	28.14	25.51	191.5%
Jul	10.00	15.00	28.15	25.70	157.0%
Aug	10.75	12.00	27.38	23.40	117.7%
Sep	11.00	12.00	26.46	21.04	91.3%
Oct	11.50	11.00	26.18	20.17	75.4%
Nov	12.00	10.50	25.91	18.68	55.7%
Dec	11.50	9.00	26.27	16.35	42.1%
average	9.27	13.17	25.66	23.23	150.6%

Source: Cepea, HF Brasil Estatísticas

Despite the achievements, the national garlic production chain still faces a structural challenge: low competitiveness against imported products, especially from China, a country that heavily subsidizes its production. Since 1996, Brazil has recognized the practice of dumping on Chinese imports, with the application of anti-dumping measures that were extended for another 12 months. The maintenance of the anti-dumping measure is essential to ensure the sustainability of the garlic production chain, to protect the domestic market against unfair competition, to preserve

the technological advances achieved and to ensure national autonomy in the supply of a fundamental food for the table of Brazilians⁵.

POTATOES

Potato planted area in Brazil grew only 13% since 2020 and yield increased 6% from 2020 to 2024 as per table 34.

Table 34: Area (hectare), quantity (tons) and amount (thousand R\$) of potatoes in Brazil from 2016 to 2025

Potato	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Hectars	129,953	118,176	120,429	116,968	117,263	116,428	118,755	123,455	124,916	132,422
Thousand R\$	5,880,194	2,979,161	3,174,946	5,453,382	5,461,742	5,483,747	6,813,204	8,170,099	12,050,657	-
Thousand Tons	3,851	3,655	3,729	3,712	3,753	3,853	3,926	4,189	4,184	4,501
R\$/kg	1.53	0.82	0.85	1.47	1.46	1.42	1.74	1.95	2.88	-
tons/ha	29.64	30.93	30.96	31.73	32.00	33.10	33.06	33.93	33.49	33.99

Source: Cepea, HF Brasil Estatísticas

Pricewise the picture is worst with only .4% of augmentation on average prices from 2020 to 2025 (Table 34) due high volumes available in the market and demand from industry.

Table 35: Sale prices of potatoes in Brazil per main production areas from 2020 to 2026 in R\$/kg

25 kg Potatoes Bag R\$/kg	Year							%
Region	2020	2021	2022	2023	2024	2025	2026	2020-2025
Água Doce (region)	1.55	1.51	2.22	2.15	3.52	1.89	1.32	22.34%
Barbacena (region)	0.60		1.00					
Belo Horizonte (capital)	2.20	2.01	2.61	2.66	4.70	2.10	1.97	-4.90%
Brasília (region)	1.42	1.31	1.80	1.56	3.45	1.34		-5.15%
Chapada Diamantina	1.77	1.61	2.45	2.17	3.46	1.93	1.73	8.73%
Curitiba (region)	1.39	1.25	1.50	2.06	3.48	1.52	1.31	9.07%
Guarapuava (region)	1.55	1.33	2.31	2.01	3.49	1.88	1.27	21.34%
Itapetininga (region)	1.43	1.27	1.87	1.87	3.43	1.24	1.35	-12.98%
Rio de Janeiro (capital)	2.22	2.07	3.39	3.68	5.01	2.13	2.05	-4.19%
São Mateus do Sul (region)	2.25							
São Paulo (capital)	2.46	2.18	3.46	3.63	5.52	2.17	2.00	-11.74%
Sul de Minas Gerais	1.45	1.36	1.71	1.98	3.15	1.23	1.15	-15.37%
Triângulo Mineiro/Alto Paranaíba	1.41	1.37	2.22	1.92	3.13	1.18	1.05	-16.88%
Vargem Grande do Sul (region)	1.03	1.32	1.81	1.53	3.05	0.96		
Average	1.62	1.55	2.18	2.27	3.78	1.63	1.52	0.40%

Source: Cepea, HF Brasil Estatísticas

⁵ Boletim Campo Futuro – Hortaliças Alho - CNA SENAR junho 2025

ONIONS

Planted area of onions in Brazil increased 5.4% from 2020 to 2024 meanwhile yields increased for 6.2% for the same period (Table 36)

Table 36: Area (hectare), quantity (tons) and amount (thousand R\$) of onions in Brazil from 2016 to 2025

Onion	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Hectars	58,228	51,830	47,779	48,671	47,504	49,025	49,144	49,434	50,057	-
Thousand R\$	1,852,659	1,422,217	1,639,519	2,230,364	2,556,826	2,487,115	4,093,531	4,074,302	3,864,231	-
Thousand Tons	1,655	1,615	1,540	1,561	1,500	1,638	1,662	1,640	1,679	1,696
R\$/kg	1.12	0.88	1.06	1.43	1.70	1.52	2.46	2.48	2.30	-
tons/ha	28.41	31.17	32.24	32.07	31.57	33.42	33.83	33.17	33.54	-

Source: Cepea, HF Brasil Estatísticas

In 2025, despite the reduction in the area, there was a delay in the harvest of the regions overlapped. Consequently, prices were lower. Producers have been accumulating losses for some harvests, with low credit limits and debts. Average prices from 2020 to 2025 reduced by 45% indicating a huge crisis in this segment and a slow recuperation for next years (Table 37).

Table 37: Sale prices of onions in Brazil per main production areas from 2020 to 2026 in R\$/kg

R\$/KG	Year							%
Regions	2020	2021	2022	2023	2024	2025	2026	2020-2025
Brasília (DF)	1.84	1.00	2.80	1.89	2.45	1.10		-40.1%
Caçador (SC)	12.11	1.83	2.21	2.25	5.05	1.86	0.82	-84.6%
Divinolândia (SP)	3.27	0.88	2.46	2.14	3.88	0.97		-70.5%
Irati (PR)	0.95	1.76	4.06	2.79	1.73	1.05	0.91	9.8%
Irecê (BA)	1.83	1.10	3.21	2.04	2.88	1.80	2.03	-1.8%
Ituporanga (SC)	1.68	1.95	2.73	2.45	2.17	1.59	0.92	-5.5%
Monte Alto (SP)	1.80	0.90	3.28	1.19	1.83	0.73		-59.6%
Mossoró (RN)	1.24	2.41	4.82	3.04	1.44	1.74	2.44	40.5%
Piedade (SP)	1.64	1.31	3.05	2.02	1.00	1.32		-19.7%
Porto Xavier (RS)	2.93	2.17	3.08	2.27	4.83	1.93		-34.0%
São José do Norte (RS)	0.85	1.42	2.19	2.31	1.41	1.20	0.80	41.1%
São José do Rio Pardo (SP)	1.59	1.41	3.39	1.68	2.23	0.96		-40.0%
São Paulo (capital)	2.74	2.39	4.46	3.53	4.90	2.24	2.29	-18.4%
Triângulo Mineiro/Alto Paranaíba MG	1.97	0.94	3.04	2.22	13.59	1.06		-46.1%
Vale do São Francisco (PE BA)	1.94	3.37	3.33	2.82	2.40	1.68	2.21	-13.7%
Average	2.61	1.70	3.24	2.34	3.52	1.44	1.55	-45.0%

Source: Cepea, HF Brasil Estatísticas

CARROTS

Planted area of carrots in Brazil increased only by 3.1% since 2020 to 2025 (Table 38).

Table 38: Area (hectare) of carrots in Brazil from 2016 to 2025

Carrot	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Hectars	16,011	14,773	14,205	13,607	13,077	12,400	12,850	13,430	14,124	13,480

Source: Cepea, HF Brasil Estatísticas

Prices from winter and summer seasons for carrot at producer, processor and wholesale for main producing regions are presented in the following Tables 39 to 41 below. Many regions have negative variations between 2020 and 2025 period. Average prices for processor and wholesale are negative.

Table 39: Winter and summer carrot producer sale prices at main production areas from 2020 to 2025 in R\$/kg

Carrots at producer	Year												%
R\$/kg (not washed)	2020		2021		2022		2023		2024		2025		2020-2025
Regions	Winter	Summer	Winter	Summer	Winter	Summer	Winter	Summer	Winter	Summer	Winter	Summer	all year
Brasília	0.84	1.05	0.93	0.61	0.81	2.86	1.66	2.22	0.53	3.00	0.94	1.04	4.40%
Caxias do Sul	0.99	1.11	1.13	0.61	1.06	3.08	2.76	1.98	0.76	2.82	0.93	0.82	-16.53%
Irecê		1.16	1.36	0.73	1.18	3.55	2.00	2.71	0.74	3.00	1.46	1.55	29.60%
Marilândia do Sul					0.92	1.36							
Triângulo Mineiro/Alto Paranaíba	0.86	1.05	0.87	0.61	0.79	2.81	1.56	2.19	0.49	3.09	0.87	1.02	-0.78%
Average	1.01		0.86		1.84		2.14		1.80		1.08		6.92%

Source: Cepea, HF Brasil Estatísticas

Table 40: Winter and summer sorted carrot processor sale prices at main production areas from 2020 to 2025

Carrots at processor	Year												%
R\$/kg (washed)	2020		2021		2022		2023		2024		2025		2020-2025
Regions	Winter	Summer	Winter	Summer	Winter	Summer	Winter	Summer	Winter	Summer	Winter	Summer	all year
Brasília	1.40	1.57	1.59	1.15	1.35	4.37	2.49	3.29	1.12	4.21	1.16	1.27	-18.1%
A	1.14	1.15	1.22	1.00	1.10	3.78	1.86	2.62	0.84	2.77	0.95	0.95	-17.5%
AAA	1.66	2.04	1.87	1.44	1.67	4.94	3.11	4.07	1.43	5.38	1.41	1.65	-17.0%
G	1.39	1.53	1.69	1.01	1.28	4.41	2.51	3.17	1.10	4.47	1.13	1.22	-19.9%
Caxias do Sul	1.61	1.48	1.79	1.11	1.59	4.41	2.86	3.07		5.07			
A	1.43	1.21	1.80	1.08	1.40	4.19	2.70	2.77		5.18			
AAA	1.92	2.06	2.02	1.24	1.87	4.92	3.05	3.40		5.23			
G	1.47	1.16	1.56	1.03	1.49	4.12	2.84	3.06		4.80			
Irecê			1.88	1.54	1.40	3.92	2.62	2.76		3.45			
Marilândia do Sul	1.23	1.29	1.24	0.97	1.50	4.27	2.25	2.96					
A	0.92	0.97	1.00	0.73	1.26	3.89	2.13	2.54					
AAA	1.84	1.92	1.76	1.46	1.75	5.08	2.38	3.38					
G	0.92	0.97	0.97	0.73	1.50	3.85							
São Paulo					1.50		2.50	3.29		5.25	1.72		
AAA							4.50		4.50	1.72			
G					1.50		2.50	2.08		6.00			
Triângulo Mineiro/Alto Paranaíba	1.40	1.64	1.53	1.17	1.47	4.24	2.46	3.22	1.16	4.43	1.16	1.27	-20.1%
A	1.12	1.26	1.18	1.03	1.28	3.72	1.88	2.54	0.86	3.14	0.97	0.93	-20.5%
AAA	1.68	2.10	1.81	1.46	1.75	4.88	3.00	4.01	1.49	5.55	1.41	1.69	-18.1%
G	1.39	1.56	1.60	1.02	1.38	4.11	2.51	3.12	1.12	4.60	1.10	1.19	-22.4%
Average	1.45		1.34		2.81		2.85		3.46		1.27		-12.37%

Source: Cepea, HF Brasil Estatísticas

Table 41: Winter and summer carrot sorted wholesale prices at main production areas from 2020 to 2025 in R\$/kg

Carrots at Wholesale		Year										% 2020-2025	
R\$/kg		2020		2021		2022		2023		2024		2025	
Regions		Winter	Summer	Winter	Summer	Winter	Summer	Winter	Summer	Winter	Summer	Winter	Summer
Brasília			0.75										
G			0.75										
Caxias do Sul			2.50				5.00						
G			2.50				5.00						
Marilândia do Sul					0.88		7.00						
AAA							7.00						
G					0.88								
São Paulo		1.48	1.74	1.63	1.30	1.38	4.62	2.41	2.96	1.80	4.49	1.37	1.57
A		1.21	1.33	1.42	1.09	1.15	4.22	1.97	2.52	1.40	3.04	1.15	1.17
AAA		1.83	2.34	1.92	1.67	1.53	5.07	2.81	3.53	2.29	6.05	1.71	2.13
G		1.41	1.55	1.55	1.14	1.47	4.58	2.44	2.84	1.71	4.37	1.26	1.40
Triângulo Mineiro/Alto Paranaíba			1.13	1.78	1.85	1.52		3.00	4.00	0.86	6.50		
A			0.75			1.50							
AAA					1.85	1.50			4.25				
G			1.50	1.78		1.55		3.00	3.75	0.86	6.50		
Average		1.52		1.48		3.38		3.04		3.32		1.47	
												-3.16%	

Source: Cepea, HF Brasil Estatísticas

TOMATOES

The planted area of tomatoes planted in Brazil increased by 23% and yield by 4% from 2020 to 2025 (Table 42). The industry of processed tomatoes used 1.7 million tons in 2024⁶ or 38.6% of quantity produced in this year.

Table 42: Area (hectare), quantity (tons) and amount (thousand R\$) of tomato in Brazil from 2016 to 2025

Tomato	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Hectars	64,296	61,509	57,420	54,970	52,163	52,047	54,513	59,313	61,348	64,047
Thousand R\$	5,475,851	4,354,465	4,918,702	5,666,999	6,078,903	6,479,154	8,663,425	10,592,486	9,918,958	-
Thousand Tons	4,167	4,225	4,127	3,921	3,757	3,679	3,819	4,166	4,408	4,782
R\$/kg	1.31	1.03	1.19	1.45	1.62	1.76	2.27	2.54	2.25	-
tons/ha	64.81	68.70	71.87	71.33	72.03	70.69	70.05	70.24	71.84	74.66

Source: Cepea, HF Brasil Estatísticas

Tomato prices (all varieties and sorts mixed) per the 15 main production areas are presented in Table 43 for 2020 to 2026. Average prices increased by 59.7% until 2025.

⁶ Tomate BR in <https://www.band.com.br/agro/noticias/safra-de-tomate-industrial-termina-com-17-milhao-de-toneladas-202412271006>

Table 43: Tomato producer sale prices at main production areas from 2020 to 2026 in R\$/kg

R\$/kg	Years							%
Regions	2020	2021	2022	2023	2024	2025	2026	2020-2025
Araguari	1.75	1.78	2.62	2.23	1.64	2.61		48.8%
Belo Horizonte (capital)	2.09	2.42	3.94	3.84	3.33	3.50	3.37	67.1%
Caçador (region)	1.37	1.53	2.74	2.28	2.42	2.24	1.97	63.1%
Campinas	2.49	3.03	3.98	4.74	3.83	4.42	3.66	77.3%
Carmópolis de Minas (region)					4.40			
Chapada Diamantina	2.20							
Itapeva (region)	2.28	1.97	3.14	2.87	2.22	2.28	2.11	-0.3%
Mogi Guaçu (region)	1.76	2.04	2.14	3.15	2.64	2.87		62.8%
Norte do Paraná						3.50		
Paty do Alferes (region)	1.50	1.82	2.16	2.31	1.68	2.56		70.4%
Rio de Janeiro (capital)	2.39	2.94	4.11	4.79	3.53	3.70	4.19	55.1%
São José de Ubá (region)	1.18	2.02	1.94	3.03	1.75	2.75		132.6%
São Paulo (capital)	2.31	2.57	3.54	3.70	3.31	3.42	3.31	47.9%
Sumaré (region)	1.82	2.39	2.72	3.70	1.80	2.92		60.4%
Venda Nova do Imigrante	1.66	2.21	2.17	3.35	2.92	2.87	2.56	73.1%
Average	1.91	2.23	2.93	3.33	2.73	3.05	3.02	59.7%

Source: Cepea, HF Brasil Estatísticas

Italian tomato prices from 2020 to 2026 at wholesale and producer for main regions are presented in Table 43. Prices had an average growth of 50.7% during this period (Table 44).

Table 44: Italian tomato producer and wholesale prices at main production areas from 2020 to 2026 in R\$/kg

Italian tomato prices	Year														%
R\$/kg	2020		2021		2022		2023		2024		2025		2026		2020-2025
Regions	W	P	W	P	W	P	W	P	W	P	W	P	W	P	all year
Belo Horizonte (capital)					5.50		4.50		3.43		4.15		3.90		
3A					5.50		4.50		3.82		4.15		3.90		
Caçador (region)										2.00					
Campinas	2.52		3.03		3.97		4.73		3.98		4.29		4.36		41.3%
3A	3.16		3.75		4.80		5.72		5.03		5.33		4.36		42.1%
Itapeva (region)	2.73	2.33		2.04		3.28		3.05		3.03		2.28		2.11	11.7%
Rio de Janeiro (capital)					4.86		5.61		3.33		3.94		4.97		
3A					4.86		5.21		4.36		4.84		4.97		
São Paulo (capital)	2.39		2.85	1.50	3.53		3.73	3.75	3.38	3.00	3.56		3.76		
3A	2.91		3.48		4.28		4.55		4.08		4.37		3.76		25.6%
Sumaré (region)			2.40		2.25		4.00			0.70					
3A			2.40												
Average	2.49		2.46		3.88		4.28		2.99		3.71		3.82		50.7%

Source: Cepea, HF Brasil Estatísticas

Round tomatoes prices had a smaller variation during this period (35.2%) but still significant (Table 45) below.

Table 45: Round tomato at producer and wholesale sorted prices at main production areas from 2020 to 2026

Round Tomato	Year														%
R\$/kg	2020		2021		2022		2023		2024		2025		2026		2020-2025
Row Labels	W	P	W	P	W	P	W	P	W	P	W	P	W	P	all year
Araguari	1.80	1.66	1.56	2.22		2.62	1.60	2.87	1.20	2.07		2.61			38.2%
Belo Horizonte (capital)	2.09		2.42		3.17		3.50		3.49	2.50	3.17		3.11		30.9%
2A	1.51		1.71		2.28		2.52		2.54	2.50	2.21		2.16		29.0%
3A	2.68		3.13		4.05		4.49		4.43		4.13		4.05		32.0%
Caçador (region)	1.20	1.55		1.53		2.74		2.28		2.85		2.24		1.97	46.0%
2A	1.20	1.55		1.53		2.74		2.28		2.85		2.24		1.97	46.0%
Campinas	2.48		3.03		3.99		4.75		3.75		4.48		3.31		47.9%
2A	1.84		2.31		3.14		3.75		2.96		3.13		2.24		35.3%
3A	3.12		3.75		4.83		5.74		4.54		5.84		4.37		55.7%
Carmópolis de Minas (region)										4.40					
Chapada Diamantina		2.20													
Itapeva (region)	2.00	2.07		1.90	2.80	3.34		2.70		1.40					
2A		2.07		1.90	2.80	3.34		2.70		1.40					
3A	2.00														
Mogi Guaçu (region)		1.76		2.04		2.14		3.15		2.64		2.87			40.3%
2A		1.76		2.04		2.14		3.15		2.64		2.87			40.3%
Norte do Paraná											3.50				
Paty do Alferes (region)		1.50	1.60	2.04	2.10	2.22	1.70	2.92	1.20	2.16		2.56			40.6%
Rio de Janeiro (capital)	2.39		2.94		3.74		3.97		3.73		3.47		3.80		17.9%
2A	1.83		2.33		2.89		3.12		2.89		2.45		2.59		5.0%
3A	2.95		3.56		4.58		4.82		4.57		4.50		5.00		26.4%
São José de Ubá (region)		1.18		2.02		1.94		3.03	2.20	1.30		2.75			36.2%
São Paulo (capital)	2.27		2.83		3.54		3.65		3.38		3.27		3.08		15.5%
2A	1.68		2.24		2.73		2.74		2.60		2.42		2.33		7.8%
3A	2.86		3.43		4.35		4.56		4.16		4.13		3.84		20.6%
Sumaré (region)		1.82		2.37		3.19	4.00	3.09	1.80	2.91		2.92			23.2%
2A		1.82		2.37		3.19	4.00	3.09	1.80	2.91		2.92			23.2%
Venda Nova do Imigrante	1.43	2.10	2.00	2.43	1.20	3.14		3.35		2.92		2.87		2.56	29.7%
Average	2.04		2.43		3.01		3.45		2.74		3.29		3.45		35.2%

Source: Cepea, HF Brasil Estatísticas

EUROPEAN UNION MERCOSUR AGREEMENT

The Mercosur and European Union Agreement negotiations began in 1999 and it was, finally, signed on January 17, 2026. The instrument covers topics such as trade in goods and services, government procurement, technical and sanitary barriers, intellectual property, sustainable development, trade defense and safeguards, trade facilitation and dispute settlement (CNA, 2026). This agreement is strategic to Brazil because the European Union was, in 2025, the second main destination for Brazilian agribusiness exports, absorbing 14.9% of total exports (US\$ 25.2 billion). It is also the second largest supplier, accounting for 19.5% of agribusiness imports (US\$ 3.9 billion).

The agreement provides for a broad and gradual opening. The EU will eliminate tariffs for 93% of its list, with a reduction period within 10 years. The Mercosur will do the same for 91% inside of 15 years period. In the first year, 39% of agricultural products exported to the EU will have tariffs reduced to zero. Nevertheless, the agreement

includes safeguards instruments. Safeguards are classic trade defense instruments, activated to protect the domestic industry in the face of sudden increases in imports that cause, or threaten to cause, serious injury. The Mercosur-European Union Agreement already provides in the EU agricultural safeguards regulation for Mercosur for citrus (oranges, lemons, and tangerines), green corn, cornstarch and cassava and garlic. By other side, the fruits such as avocados, lemons, limes, melons and watermelons, table grapes and apples will not be subject to quotas and will have their tariffs eliminated.

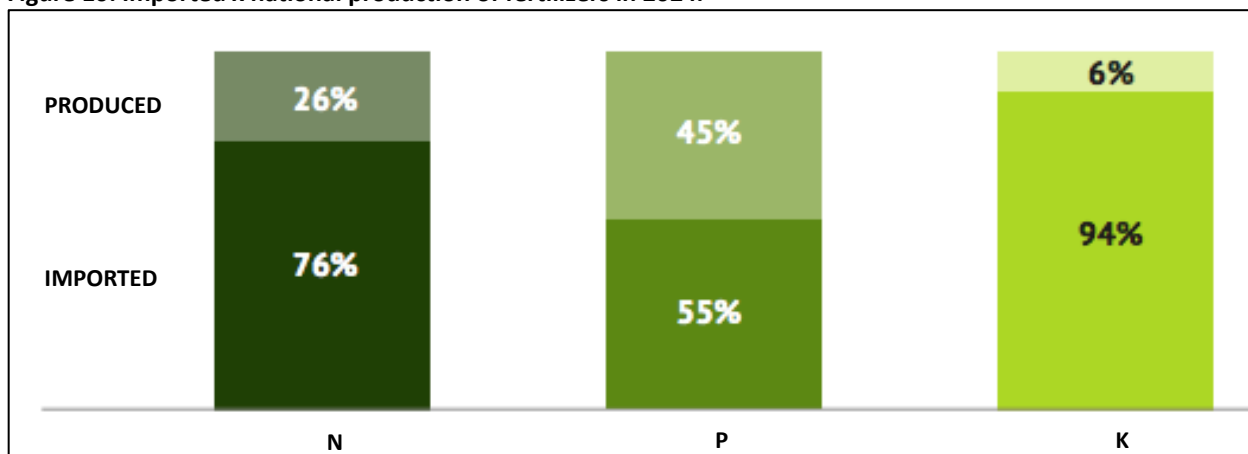
Although, the agreement will be also positive to UE companies that produce equipment, machinery and agricultural inputs. As mentioned by M. Pedro Estevão⁷, president of the Sectorial Chamber of Agricultural Machinery and Implements (CSMIA) of the Brazilian Association of the Machinery and Equipment Industry ([ABIMAQ](#)), the Mercosur-EU agreement is something positive due to the opening of markets, both in the Brazilian agricultural market for agricultural products that leave Brazil for other nations, as industrial goods that can be imported.

SCENARIOS FOR THE DEVELOPMENT OF BRAZILIAN HORTICULTURE

With the objective of projecting the future of horticulture in Brazil, were created 3 scenarios (optimistic, status quo and adverse) based on macroeconomic indicators and geopolitical issues: Inflation, Interest rates, Exchange rate R\$/US\$, Brazilian GDP, Ukraine War, Middle East (Iran) war, Brazil fertilizer dependence and Mercosur-EU agreement implementation.

Brazilian agriculture is very dependent on fertilizer imports (Figure 10). Brazil consumes 8% of the world's fertilizer production, but 76% of nitrogen sources, 55% of phosphates and 94% of potassium consumed in Brazil come from countries such as Egypt, Algeria, Canada, USA, Morocco, Nigeria, Belgium, Belarus, Russia, Saudi Arabia, Qatar, United Arab Emirates, Israel and China. This reality demonstrates the sector's sensitivity to global geopolitics, especially to Middle Eastern countries (DA SILVA, 2024).

Figure 10: Imported x national production of fertilizers in 2024.

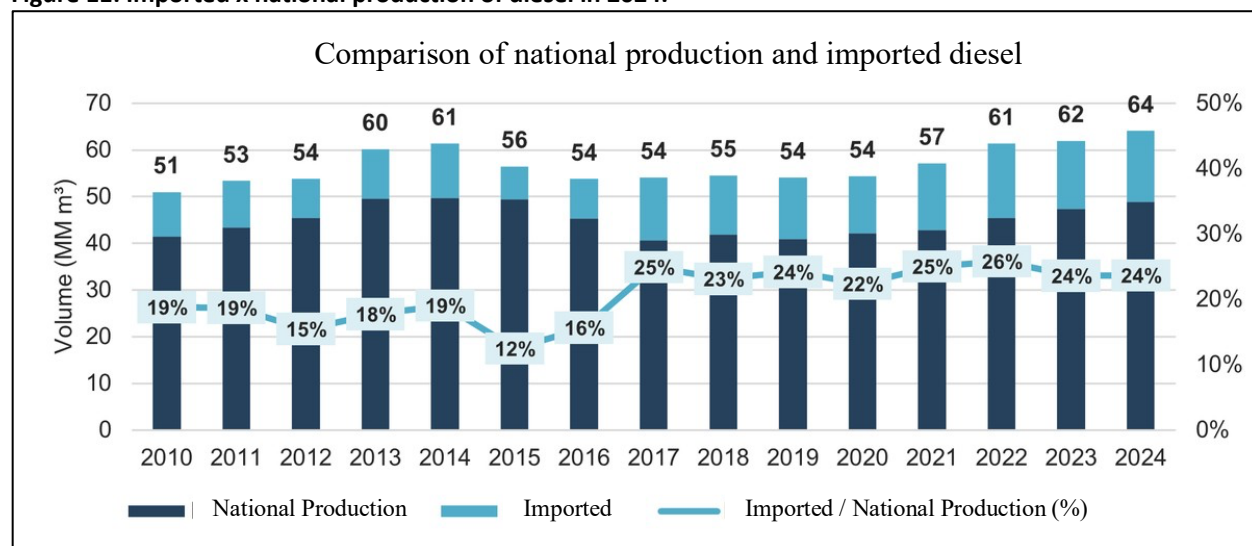


Source: Ministério da Agricultura, Pecuária e Abastecimento in Da Silva (2024)

⁷ <https://sna.agr.br/mercado-aposta-em-ganhos-moderados-para-maquinas-agricolas-apos-acordo-mercossul-ue/>

In addition, Brazilian agriculture is extremely dependent on diesel fuel for its operation. Diesel is essential to move heavy machinery (tractors) and to ensure the logistics of transporting inputs and crops. In Brazil, road transport using diesel trucks accounts for more than 60% of logistic handling⁸. Brazil imports⁹ approximately 14 million m³ of diesel per year, which represents around 24% of domestic demand in 2024. In 2024, Russia alone supplied 66.4% of this demand (Figure 11).

Figure 11: Imported x national production of diesel in 2024.



Source: Valor Investe – Globo 2025 adapted by Eacea

This context creates a high volatility of the production costs and for the cost of freight, particularly, for a continental country as Brazil.

Horticulture drivers are fertilizer costs (main structural risk), interest rate (defines investment capacity), exchange rate (directly impacts the cost of imported equipment and goods and the competitiveness of exported products), geopolitics (fertilizers + energy) and domestic income (demand for vegetables). Covid19 pandemic period, followed by Ukraine invasion and, more recently, by the Middle East war demonstrates the strong influence of fertilizers and diesel prices in the sector.

A summary of the 3 scenarios as a function of the indicators mentioned above is presented in Table 46. For each scenario, the effects of these indicators on horticulture in terms of production costs, investments, implementation of new technologies, profitability of producers and product exports were highlighted. The possible structural impacts in terms of the professionalization of the sector, integration of production chains, productivity and availability of labor were also evaluated.

⁸ CNA - FAEP System warns of the risk of lack of diesel for agribusiness, March 10th, 2026

⁹ <https://valorinveste.globo.com/blogs/carlos-heitor-campani/coluna/de-onde-vem-o-diesel-do-brasil.ghtml>

Table 46: Horticulture sector development scenarios in function of macroeconomic indicators and geopolitics

Macroeconomics X Scenarios	Optimistic	Status quo	Adverse
Inflation	Controlled inflation <1.5%	In between 1.5 to 4.5%	Inflation > 4.5%
Interest rates	Consistent drop in interest rates	high, restrictive monetary policy (~10% real)	Persistently high interest rates
Exchange rate R\$/US\$	Appreciated exchange rate (R\$ 4.8 – 5.1)	relatively stable (R\$ 5.2 – 5.5)	Depreciated exchange rate (R\$ 5.8 – 6.5)
Brazilian GDP	Brazil's GDP > 2.5%	In between 1.5%–2.5%	Weak economic growth <1.5%
Ukraine War	End of the war	Prolonged, but without escalation	Prolonged Ukraine War
Middle East (Iran) war	Stabilized geopolitical conflicts	Tensions with moderate impact on oil/fertilizers	Geopolitical escalation: Conflict with Iran raising oil and urea
Brazil fertilizer dependence	Reduction of dependence on imported fertilizers (local production + diversification)	slight price relief, but with risk of shock	Strong rise in fertilizers (external dependence)
Mercosur–EU agreement implementation	Mercosur-EU agreement implemented (tariff reduction for import technology and export fruits and vegetables)	slow progress (without full implementation)	Mercosur-EU blocked or politically unfeasible
Effects on Horticulture	Optimistic	Status quo	Adverse
Production costs	Reduction of the cost of fertilizers, equipments, technology	Fertilizers and inputs still volatile	Explosion in production cost of fertilizers, transport
Capital investments	Investment acceleration due cheaper credit	Expensive credit limits intensive expansion (greenhouses, irrigation)	No expressive investments
Technology upgrade	Expansion of protect cultivation and hydroponics, Agro 4.0 intensification	Only high added value segments can upgrade	increasing area instead productivity
Internal market	Growth in domestic consumption (income + urbanization)	Domestic consumption grows moderately (real income improves little)	food inflation and reduction of vegetable consumption
Grower profitability	Better and more stable prices for farmers	Limited price pressure with tight margins	decapitalization
Export market	New opportunities especially EU	only very competitive products	
Structural impacts	Optimistic	Status quo	Adverse
Professionalization	Acceleration of entrepreneurship and enterprises	Consolidation of more efficient producers	Departure of small producers
Market integration	Chain integration (production + distribution + retail)	Chain still fragmented	Chain
Productivity	Productivity gain per hectare	Gradual adoption of technology (irrigation, protection, Agro 4.0)	Reduction of productivity
Employment	Reduction of informality		informality

Source: EACEA

Brazilian horticulture is less exporting than traditional agribusiness and more dependent on the internal market. Also, it is extremely cost and credit sensitive. The biggest risk isn't demand, but it is the cost and financing of production. Even though horticulture sector alone cannot influence macroeconomic indicators or global geopolitics, the sector can do actions to mitigate or accelerate impacts in presented scenarios. In Table 47 it is evaluated the influence that R&D investments, Technical Assistance and Rural Extension (TARE) and ESG practice can have in each of the scenarios studied.

Table 47: Structural impacts on horticulture sector by mitigation or acceleration actions

Structural impacts	Optimistic	Status quo	Adverse
Impact on horticulture	Technology acceleration	Heterogeneous technological diffusion	Technological stagnation
Innovation and productivity	Protected cultivation at scale, digitalization (sensors, data, applied AI), Bioinputs replacing chemicals, Proactive performance-oriented technical assistance	Technical assistance still reactive, not strategic	Low diffusion of innovation. Increasing dependence on imported inputs (no efficiency in use)
ESG	ESG becomes a competitive driver. Full traceability, Carbon and water footprint. Reverse logistic.	Partial adoption. Limited traceability and growing pressure from retail chains on standardization	ESG becomes a market barrier. Small producers excluded Increased cost of compliance Problems with waste and chemical residues
Human capital	Grower professionalization, financial and risk management, data-driven decision-making. New and more qualified generation remains in the field	Low-skilled labor and low business management in the field restrict growth and productivity	Critical deficit of skilled labor and low manageability resources. Reduction of family succession in the countryside.
Structural result	Strong growth in productivity per hectare. Chain integration. Reduction of informality. Brazil approaches international standard in intensive horticulture	Moderate growth with a productive duality where technified producers advance but base remains with low productivity. ESG begins to differentiate market access	Stagnation or retraction on growth and yields. Increased production concentration and growing dependence on imports. Loss of internal competitiveness.

Source: EACEA

The future of Brazilian horticulture will not be defined only by macroeconomics, but by the institutional capacity to generate and disseminate knowledge. Expensive fertilizer can be compensated by more efficient use of resources. Expensive credit can be compensated with well-targeted public policies and implementation. ESG can be a cost or an advantage. It all depends on R&D, technical assistance and education of growers and professionals from horticulture sector.

OPPORTUNITIES FOR BUSINESS AND INVESTMENTS

The numbers presented in this report show the great opportunity for growth in production for all the segments studied both in area and quantity, but above all in productivity. Few products showed significant growth in this regard. To this reality, there is also the need to reduce production and logistics costs to facilitate access to quality vegetables to the Brazilian population with low incomes, and to make Brazilian products more competitive for export or face imports. EMBRAPA (2018) and several other institutions have mapped the challenges and opportunities for the agriculture sector¹⁰. A list of opportunities was already described in first report, but we update and highlight some general opportunities based on grower and professional demands from horticulture sector as it follows:

- Bioproduct solutions used in soil health, crop protection and post-harvest treatments. Priority to minor crops.
- Any solution that optimises or reduces the use of chemical fertilizers, as increasing biological fixation of nitrogen in the soil to other species, new sources of fertilizers and slow-release fertilizers etc.
- Controlled environmental agriculture (CAE) solutions adapted to tropical and subtropical Brazilian conditions both in rural and peri-urban areas. Solutions include modern structures with climate control, heating systems, injection of CO₂, supplement light, climate and fertirrigation automation, robotics, sensors, IoT, IA applications, soilless solutions, indoor pollination solutions, recirculation of hydroponic solution, covering films adapted to Brazil climate. Labour and water availability, pest and disease control and weather extreme events due climate

¹⁰ EMBRAPA (2018) Vision 2030: the future of Brazilian agriculture.

change are forcing the adoption of protect agriculture technologies as real need for many crops like berries, flowers, leaves, tomatoes, bellpepper, cucumber, grapes, transplants, garlic and potato seeds etc.

- Genetics better adapted to Brazilian climate with resistance to national diseases and plagues.
- Genetics better adapted to CAE production.
- Solutions that improve the logistic of *in nature* crops in the Brazilian weather context with a national lack of cold chain and to the long-distance export need as packaging, cooling systems and any other post-harvest treatment that could reduce food losses in the horticultural chain.
- Solutions to improve labor technical knowledge adapted to specifics of horticultural crops. Education, training and independent technical assistance to growers and professionals.
- Solutions to reduction of labour intensity in horticultural operations: mechanization, automation, or management for seedling, grafting, planting, harvesting, spraying, sorting, packaging etc.
- Technology and solutions for production and conservation for minimal processed food, dehydration, nutraceuticals etc.
- Propagation technologies: virus free propagation technics for garlic and potatoes and vegetables grafting (tomato, cucumber, bellpepper, melon, eggplant, watermelon, pumpkins, coffee, flowers, fruits etc.) is the unique solution face soil diseases or stress du climate change. Mechanization and appropriate sanitization technic solutions for these operations are a real demand from growers.
- Logistic reverse applied to horticultural sector: organic crop residues, plastic as the films used during production and packaging etc.
- Water treatment solutions and technologies to monitor, control and reduce the use of water during irrigation.
- Solutions that contribute to energy (diesel) consumption or its replacement during production or logistic operations. Any solar, wind, biomass powered energy solutions applied to rural needs.
- Solutions that contribute to merchandizing and consumption *in-nature* of fruit, vegetables and flowers. Traceability, certifications etc.
- Precision agriculture and smart farm solutions promoting use of telemetry, AI, IoT, bigdata, drones, digital integrate managing, extreme weather events predictability etc.
- Solutions promoting ESG practice with real gains to growers. Reduction of GEE, footprint calculations, carbon fixation technologies, recuperation and preservation of springs that could generate remuneration to growers.
- Plastic in agriculture is omnipresent. Solution of new polymers, additives, resins, plant based, when possible, that could reduce fossil footprint and plastic pollution in horticultural sector. Biodegradable or soil-compostable affordable films for mulch, packaging adapted to Brazilian conditions is critical.
- Solutions for efficient irrigation and automatic fertilizer application and monitoring. Soil, plant and nutrient solution meters.
- Affordable and quick solutions for identification of plagues and diseases in vegetables, fruits and flowers.

Many of these needs or opportunities above mentioned became more evident or, even, urgent during Covid19, Ukraine war and, more recently, during Middle East conflict crises. Brazil agriculture is very dependent from imported goods, especially, fertilizers and diesel. The development of national replacement solutions or diversify supplying abroad sources is an essential necessity to accelerate the development of national agriculture.

In this report we have integrate numbers of fruit and ornamental segments. As it was described Brazilian fruticulture is very competitive in exports. Therefore, it is a huge opportunity to companies and professionals to offer solutions to a sector that need international certification compliance and can afforded to that. Brazil has a huge diversification

of tropical fruits, until now, unknown. This is an opportunity that can be developed to national and international markets. Mercosur UE agreement is an additional advantage to export tariffless these unique products to Europe.

Though, Mercosur UE agreement also open doors to European companies exporting equipment, machinery, and goods to Brazilian horticultural. Foreign companies can take benefit from the large innovation and financing environment to introduce new technologies in the agricultural sector in Brazil (DA SILVA, 2026). This strategy can reduce costs and reduce risks of their implementation in the Brazilian market as described in the feasibility study for a World Horti Center implementation in Brazil. Particularly, that companies that offer CAE solutions could take an enormous advantage from the lack of technology of protect agriculture in Brazil. Protect agriculture in Brazil is growing fast last years, but technology offered by national suppliers are delayed from worldwide state-of-art. DA SILVA (2019) estimates thousands of hectares of modern greenhouse to supply the demand for the next decade¹¹. All kinds and applications of crop protection will be needed. Since high tunnels for orchards or berries to high tech greenhouses connected, for example, to ethanol distilleries (or to other agro-industrial companies or Cogen units) recovering CO₂, water and heat waste to produce vegetables, fruits and flowers with quality and competitive prices and lower environmental impact.

Importing CEA technologies to Brazil will progressively become more competitive due Mercosur-UE agreement. In this scenario, we will be witness of a development like what happened in Mexico in the 80s. The history tells that Brazil was “discovered”¹² in 1500 and then thousands of hectares of sugarcane were planted. If Mercosur-UE agreement market opening materializes and the Brasil's economy remains under control, at least, with a minimum of predictability (conditions mentioned in optimistic scenario above), we will, surely, see thousands of new hectares of vegetables, fruits and flowers being “covered” in the next 10 to 15 years generating an infinity of opportunities for investments and business!

* * *

¹¹ Cited by Da Silva (2019) MPB Biofactory at <https://www.youtube.com/watch?v=QJTNo2K2ghQ>

¹² in Portuguese the word “discover” means also “uncover”

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