

FAOSTAT ANALYTICAL BRIEF 80

Trade of agricultural commodities

2005-2022

HIGHLIGHTS

- → The monetary value* of global agricultural exports in 2022 was 2.9 times higher in nominal terms than in 2005, while the share of agriculture in total merchandise trade value increased from 6.2 percent in 2005 to 7.6 percent in 2022.
- → The Americas is the largest net food exporter, and Asia is the largest net food importer. Europe became a net food exporter in 2013. Oceania reclaimed its status as the second-largest net exporter in 2022, surpassing Europe.
- → The value of Oceania's food (excluding fish) exports went up sharply in 2022, driven by Australia (which became the third largest net exporter) and New Zealand (which remained the fifth largest).
- → World meat exports have slightly increased between 2021 and 2022, except for pigmeat. The leading region in poultry meat exports was the Americas, while Europe and the Americas were the leading exporters of pigmeat.
- → Global wheat exports decreased to 186.7 million tonnes in 2022, 13.3 million tonnes lower than in 2021.
- * Throughout this brief, all values are measured in current prices.
- ** Regional and subregional values exclude intra-trade.

FAOSTAT CROPS AND LIVESTOCK TRADE

INTRODUCTION

Trade is essential in agrifood systems, enabling the distribution of agricultural commodities worldwide. It enhances access to healthy and affordable food, playing a significant role in food security, nutrition and safety – a vital element for countries that cannot produce enough to meet their domestic demand. Trade impacts numerous economic and social factors, such as market dynamics, agricultural productivity and the diversity of its outputs, the assortment, and the quality and safety of food products, and ultimately, dietary composition.

This analytical brief looks at the overall trade of agricultural products, food excluding fish and the main commodity groups for the period 2005–2022 as covered in the FAOSTAT database.

FOOD (EXCLUDING FISH)

The monetary value of global agricultural exports in 2022 was USD 1 903 billion, which is 2.9 times higher in nominal terms than in 2005 (Figure 1). Food (excluding fish) accounted for most of this increase, and its share in the total agricultural trade increased during the same period, from 83 percent in 2005 (USD 531 billion) to 85 percent (USD 1 621 billion). Trends in the value of exports mirror to a

significant extent changes in international prices, which surged in 2007/2008 during the food security crisis (that saw, in particular, the price of cereals reach record levels) and remained high between 2011 and 2014. The share of agricultural products in total merchandise trade value went from 6.2 percent in 2005 to 7.6 percent in 2022. Peaks in 2009 (7.5 percent) and 2020 (8.5 percent) are due, respectively, to the 2008 financial crisis and the COVID-19 pandemic, which affected global trade and resulted in a decrease of the overall value of merchandise traded due to reduced flows or price variations while the value of agricultural products trade increased, resulting in an increase of the share of agricultural products in total merchandise trade. In 2022, the share stabilized, returning to the pre-pandemic level of 2019, underscoring the robustness of the global agrifood trade. Supply chains have adapted rapidly, and as a result, the quantity of food trade in all major economies bounced back to the levels observed before the pandemic.

The war in Ukraine has significantly affected the trade of agricultural commodities, particularly Ukrainian exports. Initiatives like the Black Sea Grain Initiative, established in July 2022, and the European Union—Ukraine Solidarity Lanes have played a key role in re-establishing trade channels, which is crucial for maintaining global food security. These developments emphasize the essential need for a transparent, efficient, and rule-based multilateral trading system (OECD/FAO, 2023).

2 000 10% 1 800 9% 1 600 8% 1 400 7% 1 200 6% **USD** billion 1 000 5% 800 4% 600 3% 400 2% 200 1% 0 0% 2005 2010 2015 2020 2022 Food excluding fish Non-food — Share of agricultural products in total merchandise trade

Figure 1: Value of world agricultural products exports by group and share in total merchandise trade

Source: FAO. 2023. Trade: Crops and livestock products. In: *FAOSTAT*. Rome. [Cited December 2023]. https://www.fao.org/faostat/en/#data/TCL

Fruit and vegetables accounted for 19 percent of the total value of food (excluding fish) exports in 2022, followed by cereals and preparations (17 percent) and meat and meat preparations (12 percent)

(Figure 2). The United States of America was the largest exporter¹ of food (excluding fish) in 2022 with USD 159.6 billion (10 percent of the total), followed by Brazil (USD 118 billion, or 7 percent) and the Netherlands (USD 93.5 billion, or 6 percent).

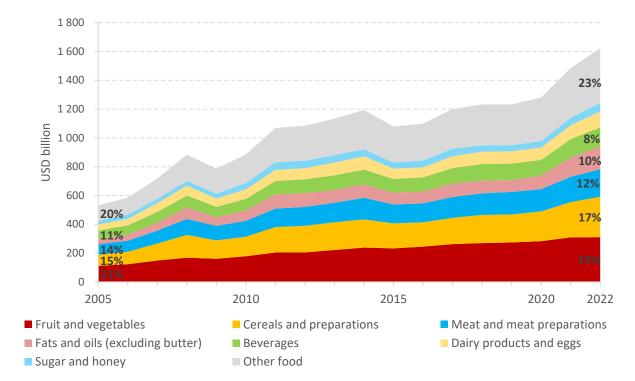


Figure 2: Value of global food (excluding fish) exports by group

Source: FAO. 2023. Trade: Crops and livestock products. In: *FAOSTAT*. Rome. [Cited December 2023]. https://www.fao.org/faostat/en/#data/TCL

Comparative advantage in producing agricultural commodities may depend on many factors including differences in climate, availability of the productive agricultural land, policy factors and population. All these factors taken together play a key role in determining trade flows between regions and countries. According to the 2021 *Agricultural Outlook* (OECD/FAO, 2021), over the coming decade, the differentiation between net exporting and net importing regions is expected to intensify. Established net exporters (when the nominal value of exports minus that of imports is positive) of agricultural commodities are expected to increase their trade surpluses while regions with important population growth or land or other natural resource constraints are expected to see their trade deficit widen.

Two regions stand out in terms of net trade, a trend that is not only consistent but also intensifying: the Americas as the largest net exporter with a USD 175 billion surplus in 2022, and Asia as the largest net importer, with a USD 293 billion deficit in 2022 (Figure 3). It is important to note that these values exclude intra-regional trade: for example, the values for Asia include only Asian countries' imports (from) and exports (to) of countries outside the region. Oceania remained a net exporter of food during the 2005–2022 period and Africa a net importer. While the Americas' and Oceania's surplus, as well as Africa's and Asia's deficit increased between 2005 and 2022, Europe, a net importer of food (excluding fish) during most of the period, became a net exporter in 2013 and overtook Oceania in 2019. In 2022,

¹ Exports include re-exports.

Oceania's net trade increased due to a surge in the export value of cereals and the region became the second largest net exporter again.

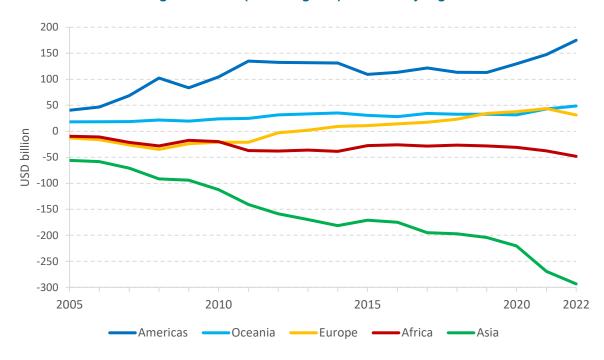


Figure 3: Food (excluding fish) net trade by region

Source: FAO. 2023. Trade: Crops and livestock products. In: *FAOSTAT*. Rome. [Cited December 2023]. https://www.fao.org/faostat/en/#data/TCL

In 2022, the largest export flow for food (excluding fish) was between Brazil and China, mainland and was worth USD 46.7 billion (with soya beans accounting for two-thirds of this value). Six of the ten largest trade flows illustrate the magnitude of the reciprocal food trade between the United States of America and Mexico and Canada – the United States of America being a net importer with both countries – and between Germany and the Kingdom of the Netherlands (Table 1).

Table 1: Largest food (excluding fish) trade flows between countries

Exports from	То	Value
Brazil	China, mainland	USD 46.7 billion
Mexico	United States of America	USD 39.1 billion
Canada	United States of America	USD 38.4 billion
United States of America	China, mainland	USD 37.8 billion
Netherlands (Kingdom of the)	Germany	USD 30.2 billion
United States of America	Canada	USD 29.8 billion
United States of America	Mexico	USD 27.9 billion
United States of America	Japan	USD 14.2 billion
Germany	Netherlands (Kingdom of the)	USD 13.9 billion
Netherlands (Kingdom of the)	Belgium	USD 13.9 billion

Source: FAO. 2023. Detailed trade matrix. In: *FAOSTAT*. Rome. [Cited December 2023]. https://www.fao.org/faostat/en/#data/TM

The largest net food (excluding fish) exporting countries in 2022 were Brazil (+USD 105.9 billion), Argentina (+USD 32.5 billion) and Australia (+USD 28.7 billion) (Figure 4). Soya beans were Brazil's and Argentina's top export, and represented 30 percent and 10 percent, respectively, of each country's total food (excluding fish) net export value. The largest net importing countries in 2022 were China, mainland (-USD 137.2 billion), Japan (-USD 48.6 billion), and the United Kingdom of Great Britain and Northern Ireland (-USD 35.4 billion) (Figure 5). China, mainland's top import was soya beans, accounting for 27 percent of the country's total food (excluding fish) net import value, Japan's was maize (7 percent), and the United Kingdom's was wine (5 percent).

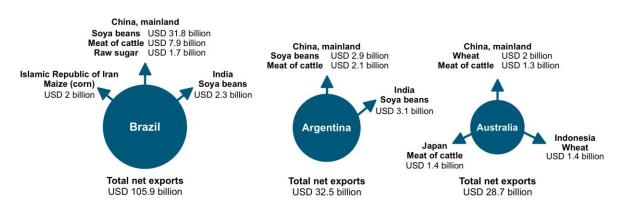


Figure 4: Top net exporters and their largest partners and trade flows

Source: FAO. 2023. Trade: Crops and livestock products. In: *FAOSTAT*. Rome. [Cited December 2023]. https://www.fao.org/faostat/en/#data/TCL and FAO. 2023. Detailed trade matrix. In: *FAOSTAT*. Rome. [Cited December 2023]. https://www.fao.org/faostat/en/#data/TM

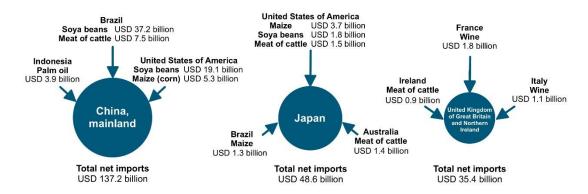


Figure 5: Top net importers and their largest partners and trade flows

Source: FAO. 2023. Trade: Crops and livestock products. In: *FAOSTAT*. Rome. [Cited December 2023]. https://www.fao.org/faostat/en/#data/TCL and FAO. 2023. Detailed trade matrix. In: *FAOSTAT*. Rome. [Cited December 2023]. https://www.fao.org/faostat/en/#data/TM

Divergent productivity growth, together with animal diseases, policy factors, climate change (which impacts on production, affecting supply) as well as socioeconomic and cultural-driven changes in consumption behaviour are all also transforming the profile of demand in countries. Trade plays a vital role in diversifying the risk for importer countries, and in smoothing the fluctuations while reinforcing comparative advantages of the single exporting countries. Despite the deepening differentiation between net exporter and net importer regions, the ranking of individual countries is not static: Argentina

became the second largest exporter, as its surplus was USD 32.6 billion in 2022, up 30 percent from USD 24.9 billion in 2021 – growth in the production of soya beans drove this increase. As mentioned above, the trade surplus of Oceania increased significantly in 2021 and trend continued in 2022, driven by Australia and New Zealand. The former became the third largest net exporter with a surplus of USD 28.7 billion in 2022, up 28 percent from USD 22.3 billion in 2021. Wheat and meat of cattle facilitated this expansion. Brazil's net exports went up 38 percent between 2021 and 22, driven by sharp increases in the export value of soya beans and cereals (Figure 6).



Figure 6: Top net exporters of food (excluding fish)

Source: FAO. 2023. Trade: Crops and livestock products. In: *FAOSTAT*. Rome. [Cited December 2023]. https://www.fao.org/faostat/en/#data/TCL

Trade flows vary considerably between regions and commodity groups (Figure 7). The largest individual flows in 2022 were observed for cereal and cereal preparations, Asia's imports (USD 83.4 billion) and America's exports (USD 48.5 billion). Asia was the largest importer of cereals and preparations, dairy products and eggs, fats and oils, meat and meat preparations, and sugar and honey; for beverages, the largest importer was the Americas, and for fruit and vegetables it was Europe. The largest exporter of beverages, and dairy products and eggs was Europe; the Americas led the exports of fruit and vegetables, cereals and preparations, meat and meat preparations, and sugar and honey, while Asia was the largest exporter of fats and oils.

In 2022, the Americas, Europe and Oceania were net exporters of nearly all commodity groups. The Americas was a net importer of beverages (-USD 19.9 billion), predominantly driven by the import of alcoholic beverages. Europe was a net importer of fruit and vegetables (-USD 36.1 billion) and sugar and honey (-USD 0.6 billion) and Oceania was a net importer of sugar and honey (-USD 0.2 billion). Asia was a net importer of all commodity groups, and Africa a net exporter of only fruit and vegetables.

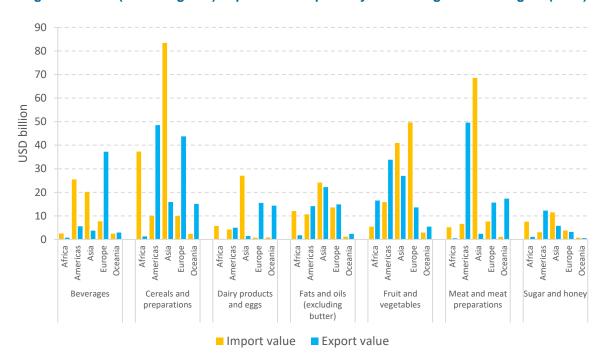


Figure 7: Food (excluding fish) imports and exports by main categories and region (2022)

CEREALS

The global wheat exports decreased to 186.7 million tonnes (Mt) in 2022, 13.3 Mt lower than in 2021 (Figure 8). This reduction can be linked to reduced exports from Ukraine and the Russian Federation, both of which were among the top five exporters in 2021. The 35 percent decrease in Ukrainian production compared to 2021 is attributed to the ongoing war, which resulted in limited access to fields and input shortages (FAO, 2022b). Similarly, global exports of barley dropped to 33 Mt in 2022, which is 10.4 Mt lower than in 2021. In contrast, global maize exports reached an all-time high of 209.5 Mt in 2022, 13.3 Mt higher than in 2021. This increase is due to increased exports from Brazil, which showed an increase of 22.9 Mt compared to 2021, driven by higher demand for feed due to the fast-expanding livestock and poultry sectors (OECD/FAO, 2023). Global rice exports also reached a record level in 2022, at 55.6 Mt, up 3.8 Mt from 2021.

² Trade data for the Russian Federation are unofficial and mirrored from its trading partners.

250
200
150
150
0
Wheat Maize (corn) Rice, milled Barley
2017–2019 average 2020 2021 2022

Figure 8: World exports of main cereals by commodity

An established trade pattern sees the Americas and Europe supplying cereals (which are important sources of food and feed) to Asia and Africa, where fast-rising populations and expanding livestock production make demand expand faster than domestic production.

In Europe, the 17.7 Mt reduction between 2021 and 2022 was mainly driven by the reduction of exports from the Russian Federation and Ukraine (resulting from lower wheat production). The increase in Oceania (around 3 Mt) was due to the significant surge in Australia's wheat exports that began in 2021 and continued in 2022. As Australian wheat production increased from 14.5 Mt in 2020 (its lowest level in more than a decade) to 36.2 Mt in 2022 (its highest level), the country became the largest wheat net exporter in 2022 with 28.8 Mt, or 15 percent of global wheat exports.

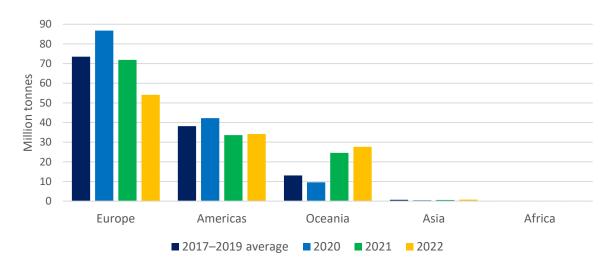


Figure 9: Global wheat exports by region

The global export unit value indices³ of the main cereals increased in 2022 to their highest level except for rice (Figure 10). The largest increases between 2021 and 2022 were observed for barley (29 percent) and wheat, following reduced harvests in Ukraine and reduced exports from the Russian Federation (Figure 11). The ongoing conflict has reduced the Russian Federation's and Ukraine's export capacities, which caused prices to rise sharply in the first half of 2022 (FAO, 2022a).

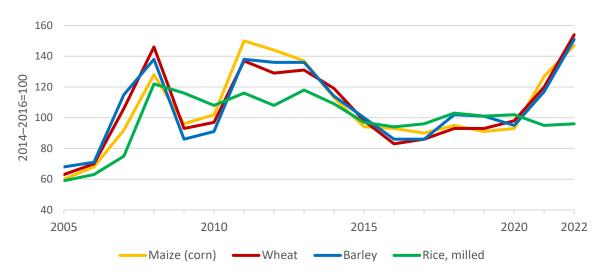


Figure 10: Export unit value index of cereals

Source: FAO. 2023. Trade: Crops and livestock products. In: *FAOSTAT*. Rome. [Cited December 2023]. https://www.fao.org/faostat/en/#data/TCL

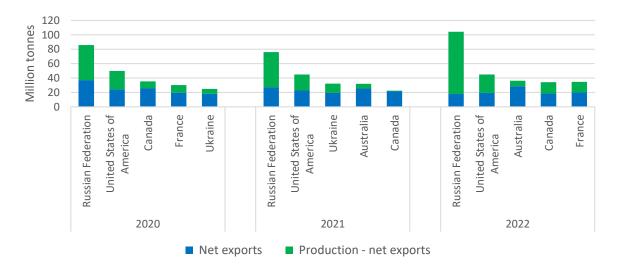


Figure 11: Production and share of net exports among top wheat net exporters

Source: FAO. 2023. Trade: Crops and livestock products. In: *FAOSTAT*. Rome. [Cited December 2023]. https://www.fao.org/faostat/en/#data/TCL and FAO. 2023. Production: Crops and livestock products. In: *FAOSTAT*. Rome. [Cited December 2023]. https://www.fao.org/faostat/en/#data/QCL

³ Export unit values are used as a proxy for international prices that are further analysed in FAO's *Food Outlook* series.

400 Million tonnes 300 200 100 0 Ukraine Brazil Argentina Romania Brazil Romania Ukraine United States of Ukraine Paraguay United States of United States of Argentina Argentina America America America 2020 2021 2022 Net exports Production - net exports

Figure 12: Production and share of net exports among top maize net exporters

Source: FAO. 2023. Trade: Crops and livestock products. In: *FAOSTAT*. Rome. [Cited December 2023]. https://www.fao.org/faostat/en/#data/TCL and FAO. 2023. Production: Crops and livestock products. In: *FAOSTAT*. Rome. [Cited December 2023]. https://www.fao.org/faostat/en/#data/QCL

MEAT

In 2022, the global meat unit value indices increased to their highest levels ever for bovine and poultry meat, and to their highest level since 2015 for pigmeat, while ovine meat remained near its 2021 peak (Figure 13). Between 2021 and 2022, the export unit value index increased by 19 percent for poultry meat and 8 percent for bovine meat (pigmeat and ovine meat varied only marginally). The international prices of meat have been rising due to a combination of factors including sharply rising feed prices, which affected poultry meat producers in leading exporting countries due to outbreaks of the highly pathogenic avian influenza (HPAI), while outbreaks of African swine fever (ASF) affected international pigmeat prices in 2018 and 2019 (FAO, 2021 and 2022a).

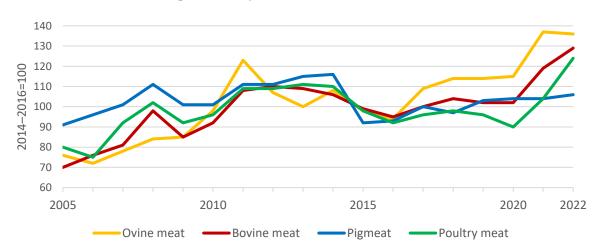


Figure 13: Export unit value index for meats

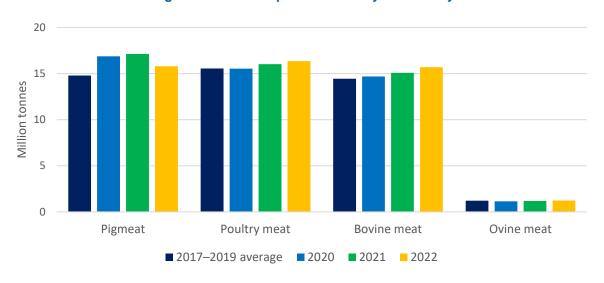


Figure 14: World exports of meat by commodity

World exports increased between 2021 and 2022 by 2–4 percent for poultry, bovine and ovine meat, and decreased by 8 percent (or 1.3 Mt) for pigmeat, largely as a consequence of the lingering effects of the ASF outbreak. Exports of poultry meat rose by 0.3 Mt due to a slight increase in production in the top producers, notably Brazil (Figures 14 and 15). Over the same period, bovine meat exports went up by 0.6 Mt.

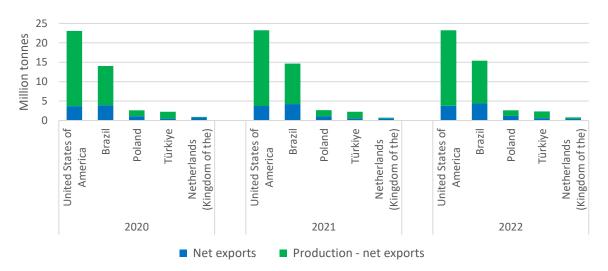


Figure 15: Production and share of net exports among top net poultry meat exporters

Source: FAO. 2023. Trade: Crops and livestock products. In: *FAOSTAT*. Rome. [Cited December 2023]. https://www.fao.org/faostat/en/#data/TCL and FAO. 2023. Production: Crops and livestock products. In: *FAOSTAT*. Rome. [Cited December 2023]. https://www.fao.org/faostat/en/#data/QCL

The leading region in poultry meat exports was the Americas, especially with Brazil and the United States of America as the main exporting countries. Even though China accounted for about 17 percent

of global poultry production, the country was not a top exporter, as most of its production is for domestic consumption.

Europe and the Americas were the leading exporters of pigmeat; the two regions experienced a decrease of 0.8 Mt and 0.6 Mt between 2021 and 2022, respectively. At the country level, four out of the top five net exporter countries of pigmeat (which together account for 37 percent of global pigmeat exports) had lower exports in 2022 compared to 2021, while Brazil's increased slightly.

OILSEEDS

The export unit values of oilseeds continued to rise in 2022, with the exception of sunflower seeds. Indices for rapeseed and soya beans reached unprecedented levels. For soya beans, production shortfalls and steady demand could be associated with the increased export unit values for the commodity: the 20.1 Mt decrease in global soybean production between 2021 and 2022 was primarily due to reduced outputs from the two largest producers and exporters (with Brazil's production falling by 14 Mt and that of the United States of America by 5.1 Mt) and reduced yield levels. The export value index for sunflower seeds saw a significant decline.

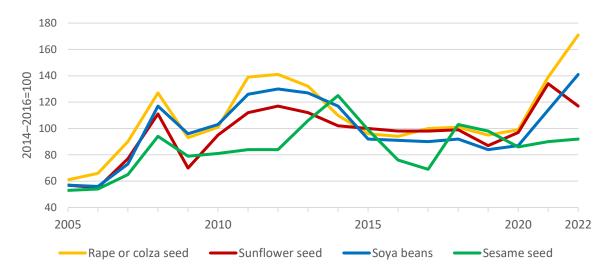


Figure 16: Export unit value index for main oilseeds

Source: FAO. 2023. Trade: Crops and livestock products. In: *FAOSTAT*. Rome. [Cited December 2023]. https://www.fao.org/faostat/en/#data/TCL

The exports of three of the main oilseeds commodities declined in 2022. In the case of soya beans (which accounted for 80 percent of world oilseed exports in quantity), exports dropped by 3.5 Mt between 2021 and 2022 but remained above the average level of 2017–2019. The observed reduction in net exports of soya beans in Brazil (–7.9 percent) was due to the lower production, from 135 Mt in 2021 to 120 Mt in 2022, due to protracted drought conditions. In contrast, the global exports of sunflower seeds rose by 3.3 Mt, reaching their highest quantity ever recorded.

With Brazil and the United States of America as the main exporters of soya beans and Canada as the main exporter of rape or colza seed (Figures 18 and 19), the Americas accounted for 81 percent of total oilseeds exports in 2022.

180 160 140 Million tonnes 120 100 80 60 40 20 0 Soya beans Rape or colza seed Sunflower seed Sesame seed ■ 2017–2019 average ■ 2020 **2021 2022**

Figure 17: World exports of oilseeds by main commodity

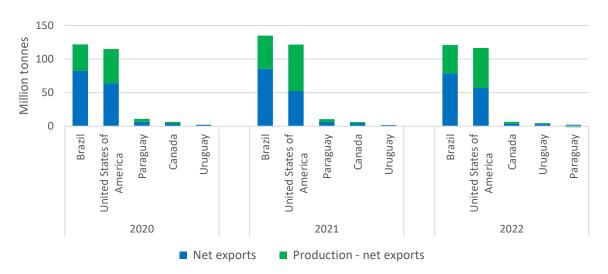


Figure 18: Production and share of net exports among top net soya beans exporters

Source: FAO. 2023. Trade: Crops and livestock products. In: *FAOSTAT*. Rome. [Cited December 2023]. https://www.fao.org/faostat/en/#data/TCL and FAO. 2023. Production: Crops and livestock products. In: *FAOSTAT*. Rome. [Cited December 2023]. https://www.fao.org/faostat/en/#data/QCL

20 Million tonnes 15 10 5 0 Canada Australia Canada Jkraine Australia -ithuania Canada Ukraine ithuania. Australia Ukraine -ithuania Hungary Romania Romania 2020 2021 2022 Net exports Production - net exports

Figure 19: Production and share of net exports among top net rape or colza seed exporters

Source: FAO. 2023. Trade: Crops and livestock products. In: *FAOSTAT*. Rome. [Cited December 2023]. https://www.fao.org/faostat/en/#data/TCL and FAO. 2023. Production: Crops and livestock products. In: *FAOSTAT*. Rome. [Cited December 2023]. https://www.fao.org/faostat/en/#data/QCL

OILS

After a steady decline between 2012 and 2020 (briefly interrupted in 2016–2017), the export unit values of the four major vegetable oils traded worldwide surged in 2022, showing increases of 75–100 percent compared to 2020 and surpassing the 2011 values (Figure 20). This increase was fuelled by tightening supplies, ambitious global biofuel targets, and China's re-engagement in the market. Notably, the production of biodiesel, which has significantly expanded over the past two decades, is exerting additional pressure on the market. Moreover, the war in Ukraine, a key exporter of sunflower seed oil, has prompted international trade policy reactions, further limiting supplies and pushing prices (OECD/FAO, 2023).

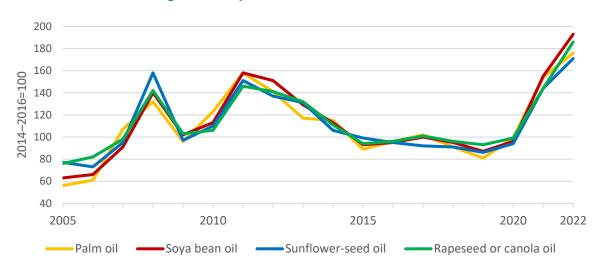


Figure 20: Export unit value index for main oils

The exported quantities of palm oil, soybean oil and rapeseed oil decreased by 1.6 percent, 2.8 percent and 10.1 percent, respectively. After the drop recorded in 2021, sunflower-seed oil exports rebounded in 2022, registering a growth rate of 6.6 percent (Figure 21).

Palm oil remains the most globally traded vegetable oil, representing 47.5 percent of all vegetable oil exports in 2022 (compared with 14 percent for sunflower-seed oil and 12.9 percent for soybean oil) with a volume of 45 Mt. The observed decrease in 2022 can be attributed to a 7.6 percent reduction in exports from Malaysia and a 2 percent decrease from Indonesia, the latter resulting from an export ban on refined and crude palm oil.

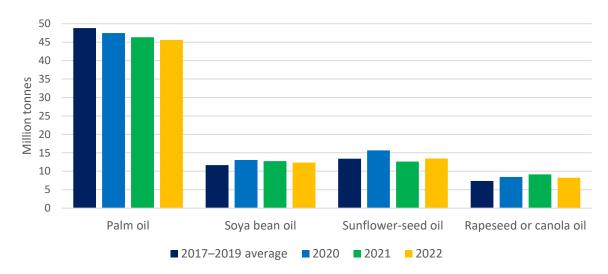


Figure 21: World exports of vegetable oils by main commodity

Source: FAO. 2023. Trade: Crops and livestock products. In: *FAOSTAT*. Rome. [Cited December 2023]. https://www.fao.org/faostat/en/#data/TCL

The origin of exports shows great concentration for palm oil, which is mainly exported from Asian countries and sunflower-seed oil, for which exports mostly originate from European countries. The leading countries for palm oil exports are Indonesia and Malaysia. The Russian Federation and Ukraine are the top two exporters for sunflower-seed oil and recorded both a 15 percent fall in their net exports quantities in 2022 compared with 2021 (Figure 22). Asia is the major importer for all vegetable oils except palm oil, for which the top importer is Europe. India remained as the largest importer and Türkiye became the second largest importer of sunflower-seed oil by increasing its imports in 2022 by 60 percent.

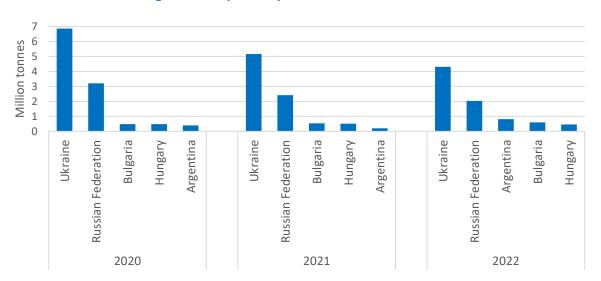


Figure 22: Top net exporters of sunflower-seed oil

EXPLANATORY NOTES

The FAOSTAT Trade data domain disseminates statistics on the international trade of food and agricultural products for the period of 1961–2022. The food and agricultural trade datasets are collected, processed and disseminated by the Food and Agriculture Organization of the United Nations (FAO) according to the standard international merchandise trade statistics methodology. The detailed tariff line data for reporting countries (import and export quantities, animal numbers and dollar values for total and bilateral flows) are mainly obtained from the United Nations Statistics Division (UNSD) for the world excluding the European Union, while the raw data from European countries are obtained from Eurostat and national authorities as needed. Trade partner data are used for non-reporting countries together with other alternative data sources.

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