



**Food and Agriculture  
Organization of the  
United Nations**

ISSN 2709-006X [Print]  
ISSN 2709-0078 [Online]



FAOSTAT ANALYTICAL BRIEF 60

# Agricultural production statistics 2000–2021

## HIGHLIGHTS

- The global production of primary crop commodities reached 9.5 billion tonnes in 2021, increasing by 54 percent since 2000 and 2 percent since 2020.
- The global production of cereals went up 64 million tonnes, or 2.1 percent, between 2020 and 2021, driven by a 4.1 percent increase in maize production. Maize, wheat and rice accounted for 90 percent of the total cereals production in 2021.
- The world production of sugar crops increased marginally between 2020 and 2021. Sugar cane is the main sugar crop, with 1.9 billion tonnes in 2021, compared 270 million tonnes in 2021 for sugar beet.
- Roots and tubers global production rose by 1.9 percent between 2020 and 2021, mostly due to an increase in cassava and potatoes production.
- In 2021, world fruit and vegetable production reached 910 million tonnes (+1.1 percent from 2020) and 1.2 billion tonnes (+1.4 percent), respectively.
- The production of oil palm fruit, soya beans and rapeseed, the main oil crops contributing to vegetable oils, reached a volume of 859 million tons in 2021, increasing by 2 percent from 2020.
- Chicken, pig, and cattle were the main meats produced worldwide, accounting for 316 million tonnes in 2021.
- China's pig meat production recovered in 2021 after the low volumes of 2019–2020 caused by the African swine fever outbreak.

## FAOSTAT CROPS AND LIVESTOCK PRODUCTION

### INTRODUCTION

The 2030 Agenda of the United Nations (UN) sets ambitious objectives for the economy to preserve natural resources and achieve climate neutrality by 2050. Within this vision, the agricultural sector assumes a key role in meeting the Sustainable Development Goals (SDGs) to ensure nutritious and healthy food access, create circular agricultural systems and reduce waste in the supply chain. Feeding the growing population without overexploiting resources is a concern that can be addressed through the adoption of long-term sustainable production techniques. The global sustainability challenge, in turn, impacts differently on each territory depending on its own specificities.

Therefore, significant efforts and investments are needed from all actors and institutions involved in the different stages to promote coordinated and effective actions. The Statistics Division (ESS) of the Food

and Agriculture Organization of the United Nations (FAO) contributes with a solid database that harmonizes agricultural production data collected for 199 countries and territories. This analytical brief summarizes and highlights the relevant patterns up to 2021 revealed by the latest data update published on the FAOSTAT data platform.

## **OVERVIEW OF THE GLOBAL AGRICULTURAL PRODUCTION DATA**

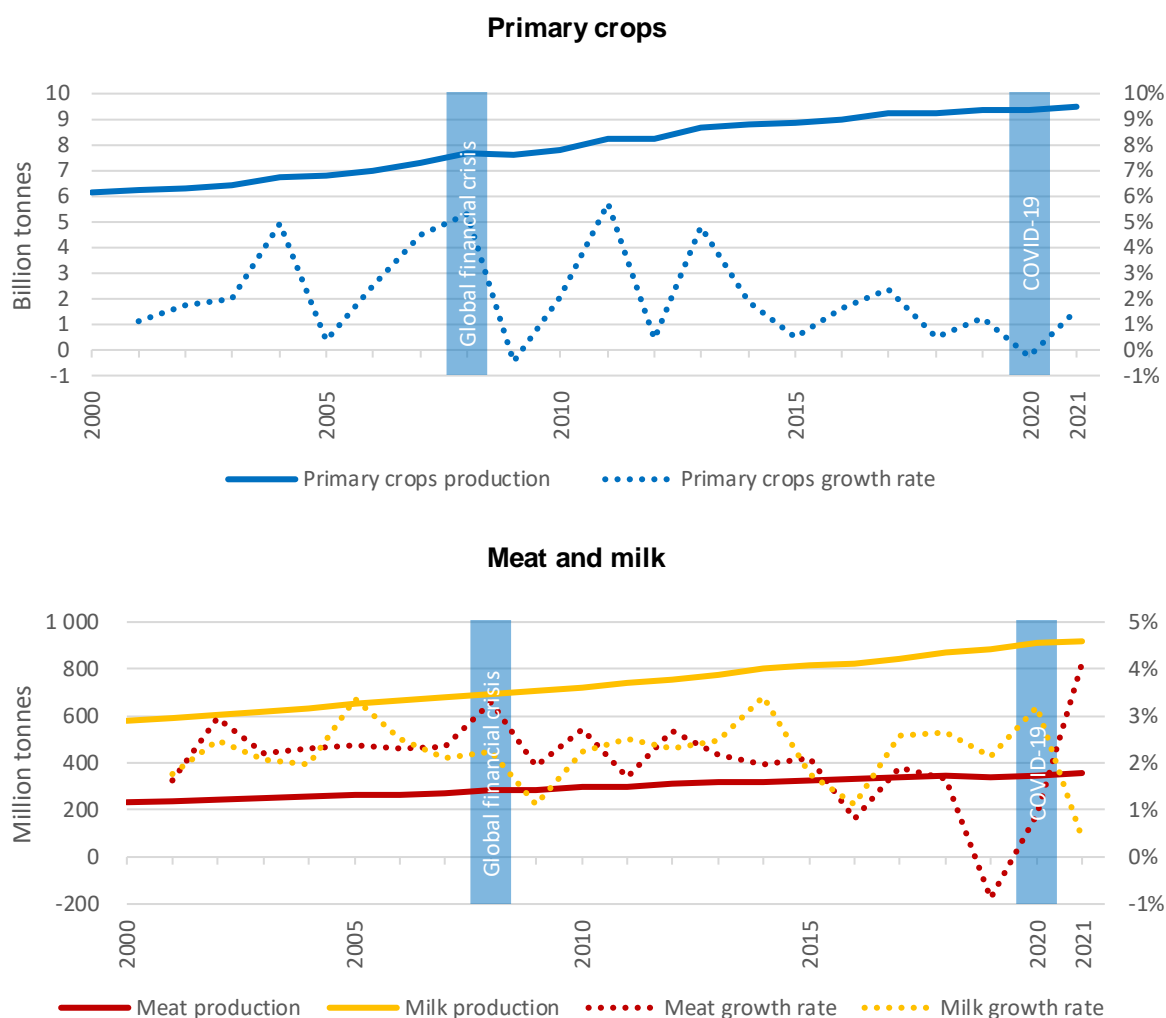
The past two decades have seen a steady upward trend in world agricultural production to meet expanding demand, with primary crops production growing by 54 percent between 2000 and 2021, meat production growing by 53 percent and milk production by 58 percent. The growth in agricultural production since 2000 was therefore faster than the growth in population (29 percent), due to the intensification in farming activities (with an increased use of irrigation, pesticides and fertilizers, and cropland expansion) and enhanced production technologies (including improved farming practices and the use of high-yield crops), all the while facing the adverse effects of climate change.

Over the last decade, the primary crops annual production growth rate was the highest in 2011 (5.7 percent, led by sugar crops) and 2013 (4.8 percent, driven by cereals and oil crops). It slowed down towards the end of the 2010s and was even negative in 2020 as the production of both sugar beet and sugar cane dropped due to a combination of adverse weather conditions, political regulations and the spread of the beet yellow virus that induced a sharp decline in production for many large producers. However, aggregate primary crop data did not show a clear correlation with global economic trends during the period of the COVID-19 pandemic even though some production phases may have been locally affected.

Meat production showed an overall steady increase since 2000, but with a sharp drop in 2019 because of the African swine fever outbreak that hit several Asian countries, in particular China. Milk production kept increasing throughout the period, with annual growth rates around 1–3 percent except in 2021.



Figure 1: World agricultural production volumes and growth rates by commodity group



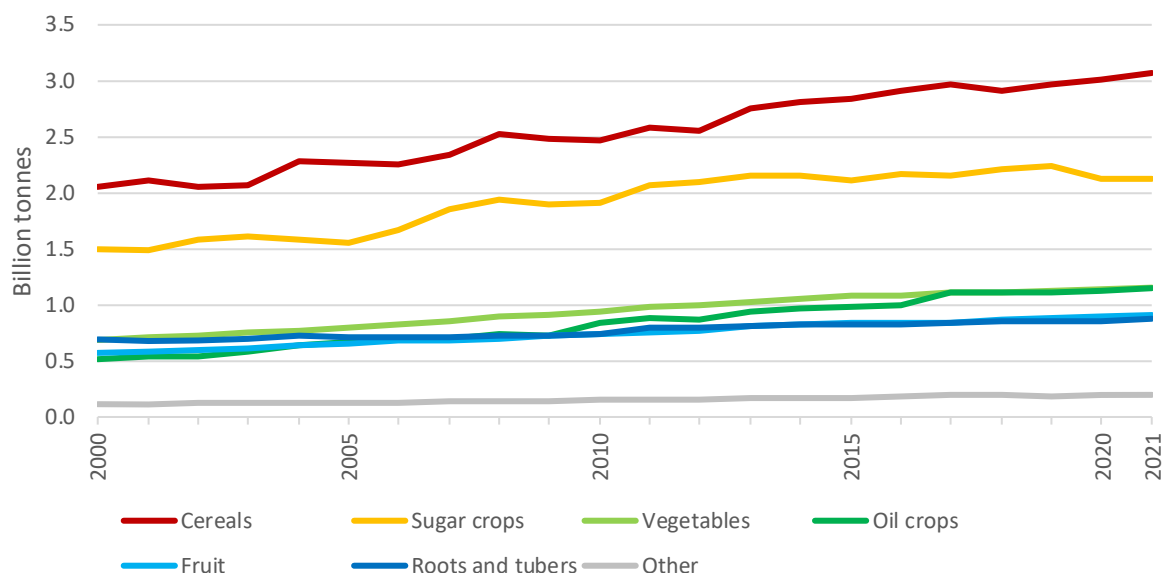
**Source:** FAO. 2022. FAOSTAT: Production: Crops and livestock products. In: FAO. Rome. Cited December 2022. <https://www.fao.org/faostat/en/#data/QCL>

## PRIMARY CROPS

The global agricultural production of primary crops grew by 54 percent between 2000 and 2021, as mentioned above, reaching 9.5 billion tonnes in 2021 (Figure 1) that were used as food, feed or inputs to be transformed into products ranging from biofuels to cosmetics. In the long term, the composition of the primary crops group reflects how different species obtain larger or smaller shares of land, which can be related to productivity boosts, changing national regulations, extraordinary events or climate change.

Cereals were the leading group of crops produced in 2021 (Figure 2), representing 32 percent of the total, followed by sugar crops (22 percent), vegetables and oil crops (12 percent each), fruit (10 percent), and roots and tubers (9 percent). Since 2000, the share of cereals, sugar crops, and roots and tubers contracted in favour of fruit, vegetables and oil crops. In particular, oil crop production had the largest growth rate over the period, with an increase of 123 percent between 2000 and 2021, while roots and tubers had the smallest increase (27 percent).

**Figure 2: Global production of primary crops by commodity group**



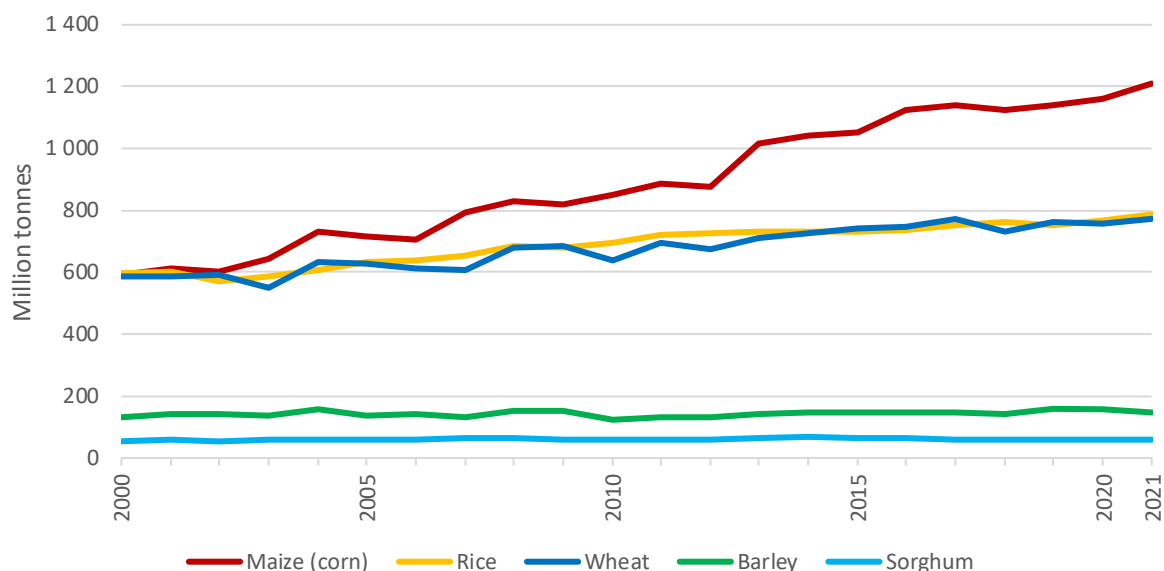
**Source:** FAO. 2022. FAOSTAT: Production: Crops and livestock products. In: *FAO*. Rome. Cited December 2022. <https://www.fao.org/faostat/en/#data/QCL>

## CEREALS

Maize, rice, wheat, barley and sorghum are the five most produced species of cereals (Figure 3). Maize showed the highest production (1.2 billion tonnes in 2021) and fastest growth over the period (+104 percent since 2000) compared to the other major grains, as it has wider uses in the biofuel and animal feed sectors. Rice and wheat had very similar production levels and growth rates: 787 million tonnes in 2021 and +32 percent since 2000 for rice, compared to 771 million tonnes and +31 percent for wheat. Barley and sorghum had a fairly stable production over time, with a drop of 8 percent between 2020 and 2021 for barley.

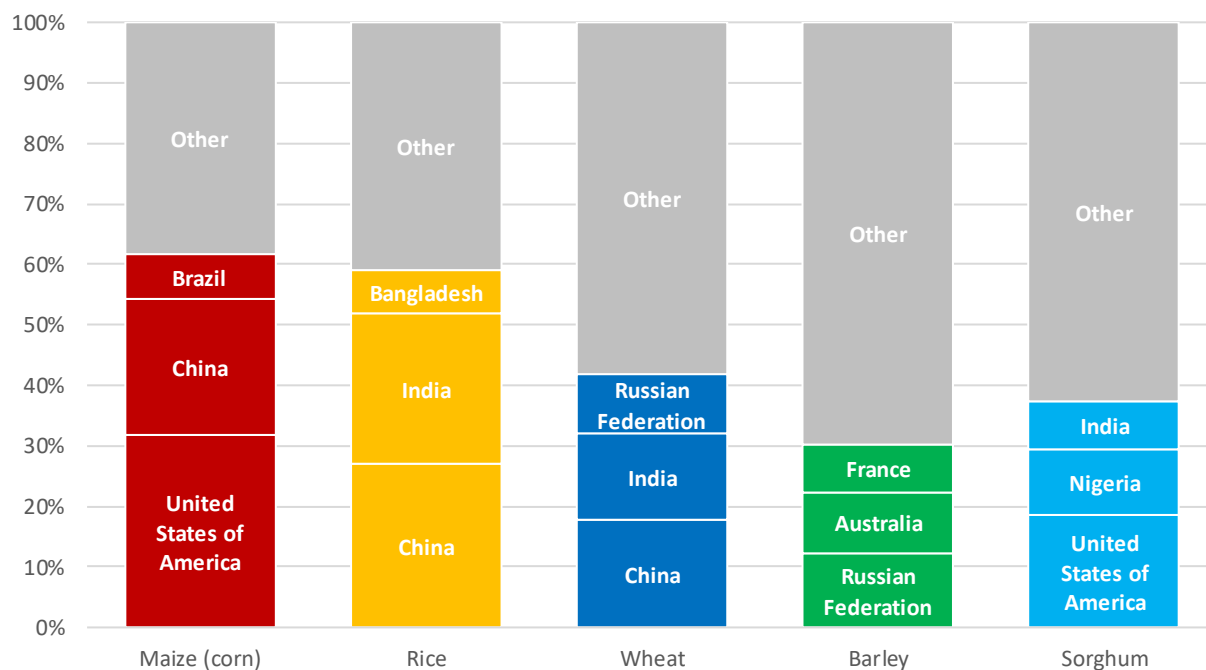
In 2021, the Americas were the top producing region for maize, with the United States of America and Brazil accounting together for 39 percent of the world production (Figure 4). China was the second largest producer, with a share of almost 23 percent. Asia was the leader for rice production, with the top three producers in the region: China (27 percent of the global total), India (25 percent) and Bangladesh (7 percent). Asia also accounted for a large share of the global wheat volumes with China (18 percent of the world total) and India (14 percent). The Russian Federation was the third largest wheat producer in 2021, with 10 percent of the global production.

Figure 3: World production of top cereals



Source: FAO. 2022. FAOSTAT: Production: Crops and livestock products. In: FAO. Rome. Cited December 2022. <https://www.fao.org/faostat/en/#data/QCL>

Figure 4: Top largest cereal producers in 2021



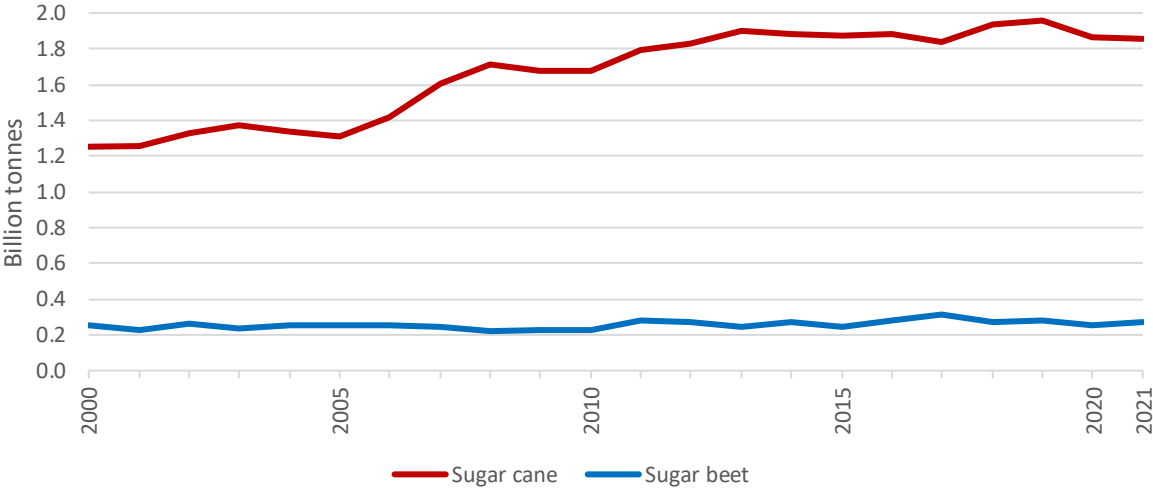
Source: FAO. 2022. FAOSTAT: Production: Crops and livestock products. In: FAO. Rome. Cited December 2022. <https://www.fao.org/faostat/en/#data/QCL>

**SUGAR CROPS**

The cultivation of sugar crop is influenced by a number of factors, including climate instability, price volatility as well as medical health recommendations (such as the World Health Organization guidelines) that incentivize the reduction of sugar consumption.

Sugar cane is the main sugar crop, with world volumes exceeding 1.5 billion tonnes since 2007 and rising to 1.9 billion tonnes in 2021 (Figure 5). Sugar beet volumes stagnated at much lower levels, totalling 270 million tonnes in 2021. Sugar crops other than cane and beet played a minor role, with less than 1 million tonnes produced in 2021.

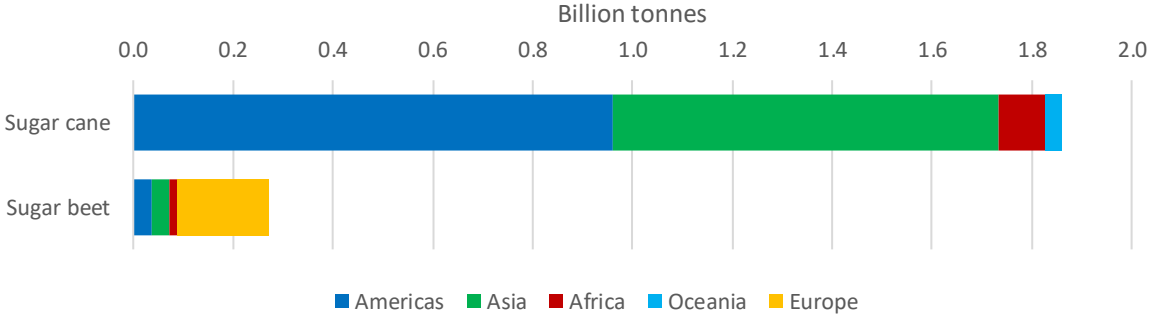
**Figure 5: Global sugar crop production by product**



**Source:** FAO. 2022. FAOSTAT: Production: Crops and livestock products. In: FAO. Rome. Cited December 2022. <https://www.fao.org/faostat/en/#data/QCL>

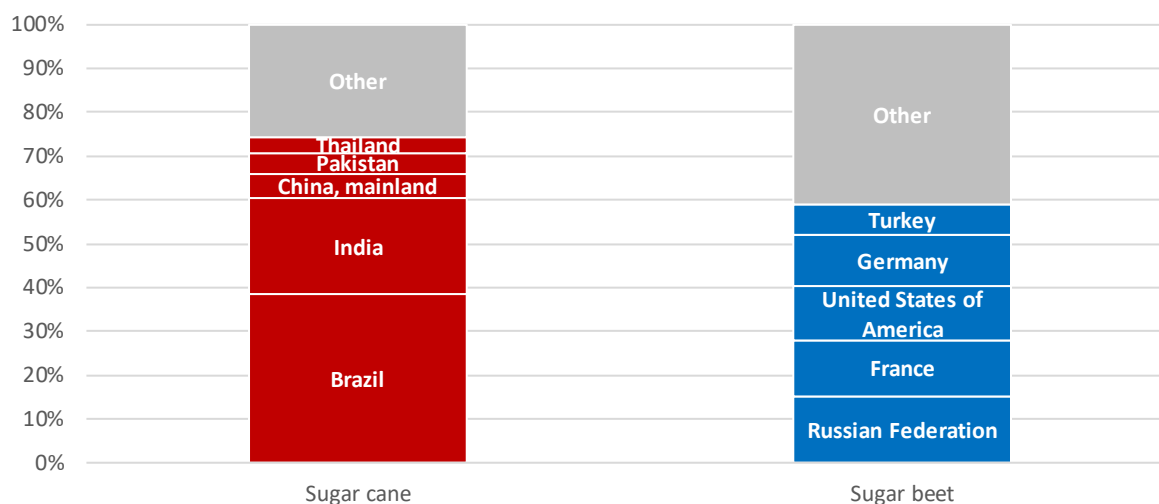
The Americas stood out as the leading region for sugar cane production in 2021 (962 million tonnes), with Asia second with 770 million tonnes. Europe was the main producer of sugar beet with 181 million tonnes (Figure 6).

**Figure 6: Regional production of sugar crops in 2021**



**Source:** FAO. 2022. FAOSTAT: Production: Crops and livestock products. In: FAO. Rome. Cited December 2022. <https://www.fao.org/faostat/en/#data/QCL>

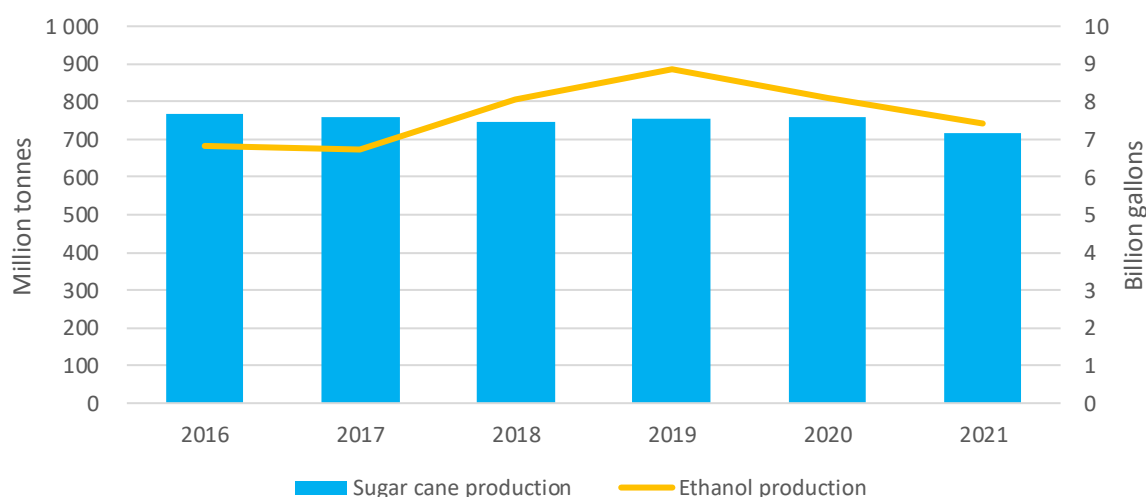
Figure 7: Top largest sugar crops producers in 2021



**Source:** FAO. 2022. FAOSTAT: Production: Crops and livestock products. In: FAO. Rome. Cited December 2022. <https://www.fao.org/faostat/en/#data/QCL>

Brazil was the largest producer of sugar cane in 2021 and accounted for 38 percent of the global production, followed by India (22 percent), China, mainland, Pakistan and Thailand (4–6 percent each) (Figure 7). However, Brazilian sugar cane production experienced a large decline in 2021, down to 716 million tonnes (a 5 percent decrease from 2020) due to low rainfall. This also affected the production of ethanol resources, for which Brazil is the world's second-largest producer after the United States of America (Figure 8).

Figure 8: Brazil sugar cane and ethanol production



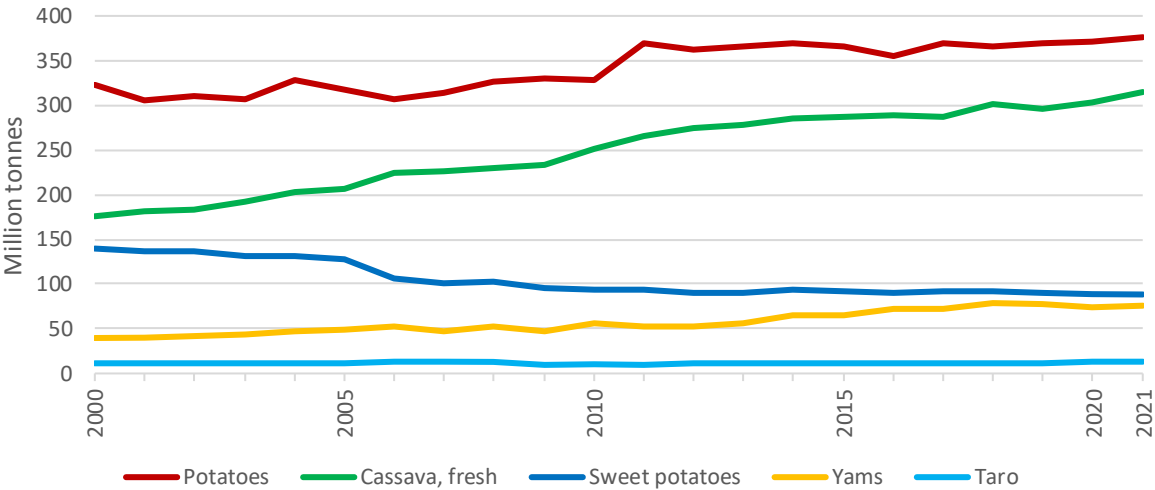
**Source:** FAO. 2022. FAOSTAT: Production: Crops and livestock products. In: FAO. Rome. Cited December 2022. <https://www.fao.org/faostat/en/#data/QCL> and Renewable Fuels Association. 2022. Annual Ethanol Production. In: RFA. Ellisville. Cited December 2022. <https://ethanolrfa.org/markets-and-statistics/annual-ethanol-production>



**ROOTS AND TUBERS**

Potatoes, cassava, sweet potatoes, yams and taro are the major roots and tubers produced globally (Figure 9). Potatoes were the most produced commodity in the group, with 376 million tonnes in 2021, (up 17 percent compared with 2000), followed by cassava with 315 million tonnes (up 79 percent compared with 2000). The production of each of the other three highest ranked tubers was below 100 million tonnes in 2021, with different trends: the production of sweet potatoes declined by 36 percent between 2000 and 2021, while that of yams and taro grew by 90 percent and 17 percent, respectively. Roots and tubers were mainly produced in Africa and Asia, at around 340 million tonnes in both regions that account for around 80 percent of the global production.

**Figure 9: World production of top roots and tubers**

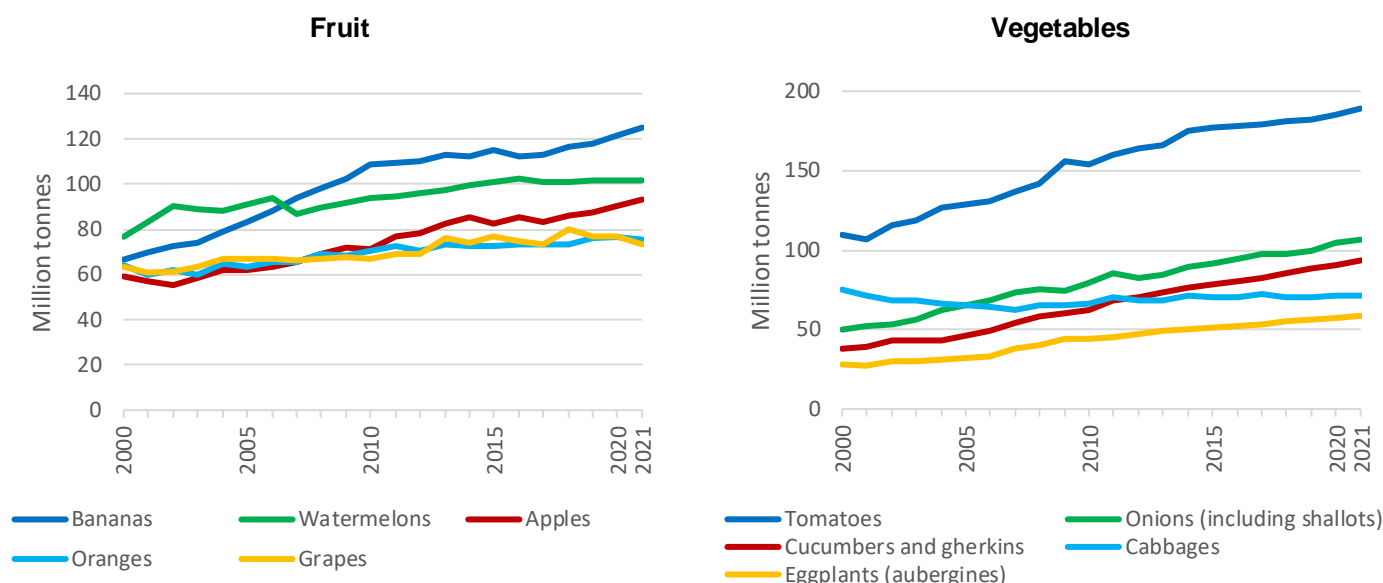


**Source:** FAO. 2022. FAOSTAT: Production: Crops and livestock products. In: FAO. Rome. Cited December 2022. <https://www.fao.org/faostat/en/#data/QCL>

**FRUIT AND VEGETABLES**

Figure 10 shows the upward trend the global production of most of the major fruit and vegetables since 2000. The aggregate world fruit production recorded a growth of 59 percent from 2000 to 2021 with a total production volume in 2021 of 910 million tonnes. Bananas were the most produced fruit with 125 million tonnes in 2021, followed by watermelons (102 million tonnes), apples (93 million tonnes), oranges (76 million tonnes), and grapes (74 million tonnes). The global production of vegetables went up 68 percent during the same period, reaching 1.15 billion tonnes in 2021. Tomatoes ranked as the most produced vegetable with 189 million tonnes in 2021, followed by onions (107 million tonnes, including shallots), cucumbers (93 million tonnes, including gherkins), cabbages (71 million tonnes) and eggplants (59 million tonnes).

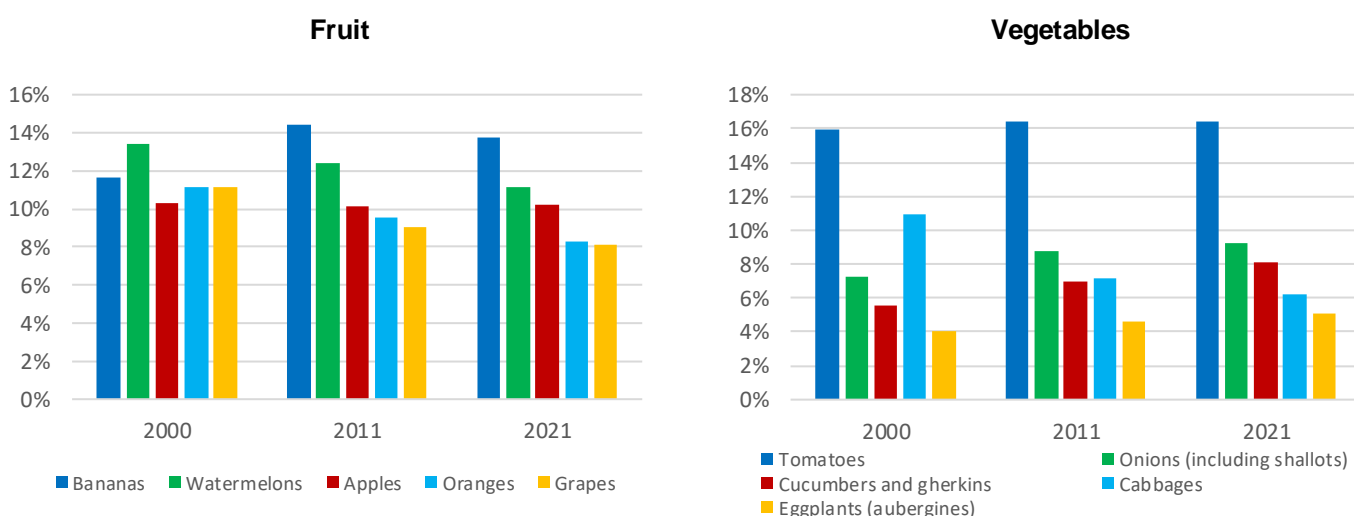
Figure 10: World production of top fruit and vegetables



**Source:** FAO. 2022. FAOSTAT: Production: Crops and livestock products. In: FAO. Rome. Cited December 2022. <https://www.fao.org/faostat/en/#data/QCL>

The share of bananas in total fruit production showed a slight increase from 12 percent to 14 percent between 2000 and 2021, while apples remained constant at 10 percent. The share of watermelons decreased from 13 percent to 11 percent and that of both grapes and oranges declined from 11 percent to 8 percent (Figure 11). For vegetables, tomatoes accounted for the largest share of the group and remained stable at 16 percent over the period. The share of cucumbers rose from 6 percent to 8 percent, that of onions from 7 percent to 9 percent and that of eggplants from 4 percent to 5 percent. The share of cabbages showed a large decrease (from 11 percent to 6 percent) (Figure 11).

Figure 11: Shares of top fruit and vegetables in world production

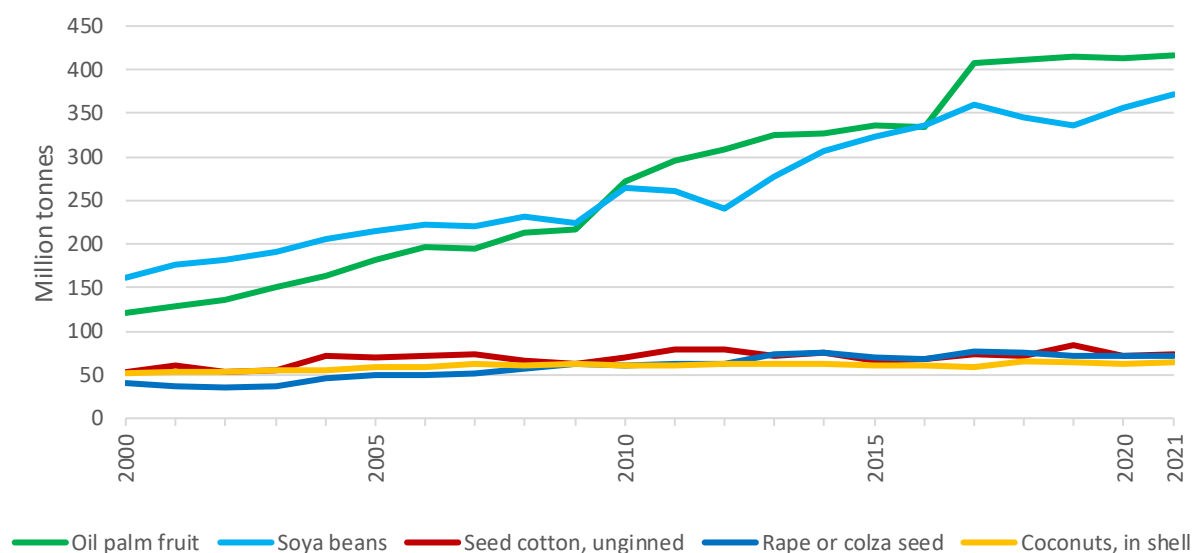


**Source:** FAO. 2022. FAOSTAT: Production: Crops and livestock products. In: FAO. Rome. Cited December 2022. <https://www.fao.org/faostat/en/#data/QCL>

## OIL CROPS

Oil palm fruit, soya beans, seed cotton (unginned), rape (or colza) seed and coconut (in shell) were the main oil crops produced in the world in 2021 (Figure 12). Oil palm fruit and soya beans are by far the largest commodities in the group, with production volumes of 416 million tonnes and 372 million tonnes, respectively. These two crops had extremely strong growth since 2000: +244 percent for oil palm fruit and +130 percent for soya beans. In contrast, seed cotton (unginned), rapeseed and coconuts showed consistent and similar production levels over the past decades, reporting to a total of 73, 71 and 64 million tonnes in 2021, respectively, and a total increase of 44 percent since the year 2000.

Figure 12: World production of top oil crops

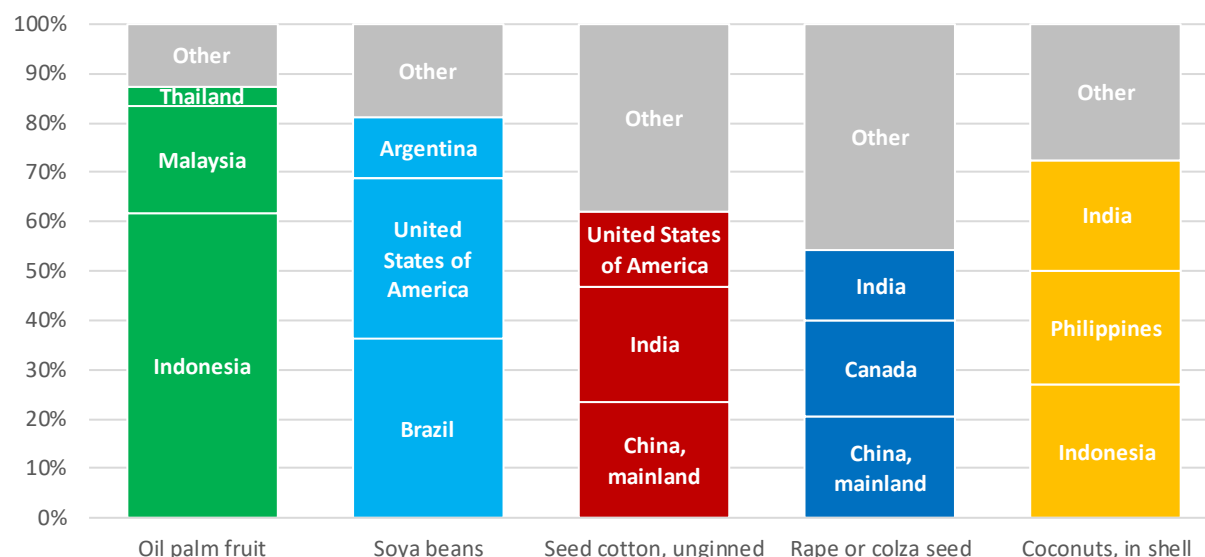


**Source:** FAO. 2022. FAOSTAT: Production: Crops and livestock products. In: FAO. Rome. Cited December 2022. <https://www.fao.org/faostat/en/#data/QCL>

Asia accounted for nearly all the global oil palm fruit production with Indonesia, Malaysia and Thailand together producing 87 percent of the total in 2021 (Figure 13). The Americas produced most of the soya beans with Brazil, the United States of America and Argentina representing over 80 percent of the total. India and China are the leading producers of cotton seed, with similar quantities produced in 2021 – combined with the United States of America, they produced 63 percent of the world total. China, Canada and India are the main producers of rapeseed. Coconuts are prevalently produced in Asia region, with Indonesia, the Philippines and India as the top producers.

In recent years, Malaysia has been witnessing a decline in the production of oil palm fruit, which is also reflected in the production of derived products. The decline is mainly related to the labour shortage caused by the pandemic. However, other factors must also be considered: firstly, the meteorological changes that caused severe storms and flooding in 2020; secondly, the volatility of currency exchange rates that led to an increase in production costs; and finally, the geopolitical instability in the region.

Figure 13: Top largest oil crops producers in 2021



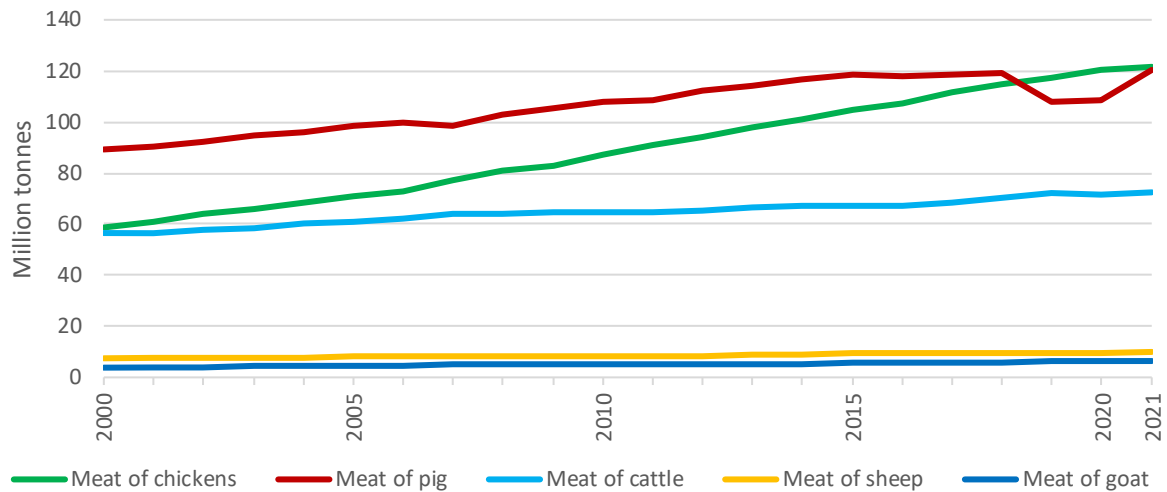
**Source:** FAO. 2022. FAOSTAT: Production: Crops and livestock products. In: FAO. Rome. Cited December 2022. <https://www.fao.org/faostat/en/#data/QCL>

## PRIMARY LIVESTOCK

### MEAT

Chicken, pig, cattle, sheep and goat were the main type of meat produced between 2000 and 2021 (Figure 14), accounting in 2021 for 93 percent (331 million tonnes) of the total meat production. The production of chicken meat grew the fastest over the period (+107 percent, to 122 million tonnes in 2021) and overtook the production of pig meat in 2019 as the African swine fever affected Asian countries; after declines in 2019 and 2020, pig meat production recovered in 2021 to 120 million tonnes, the same production level of 2017–2018. Meat of cattle, sheep and goat showed regular and steady growth, reaching 73, 10 and 6 million tonnes in 2021, respectively. At the regional level, Asia is the main producer of meat (43 percent of the global total), followed by the Americas (31 percent), Europe (18 percent), Africa (6 percent) and Oceania (2 percent).

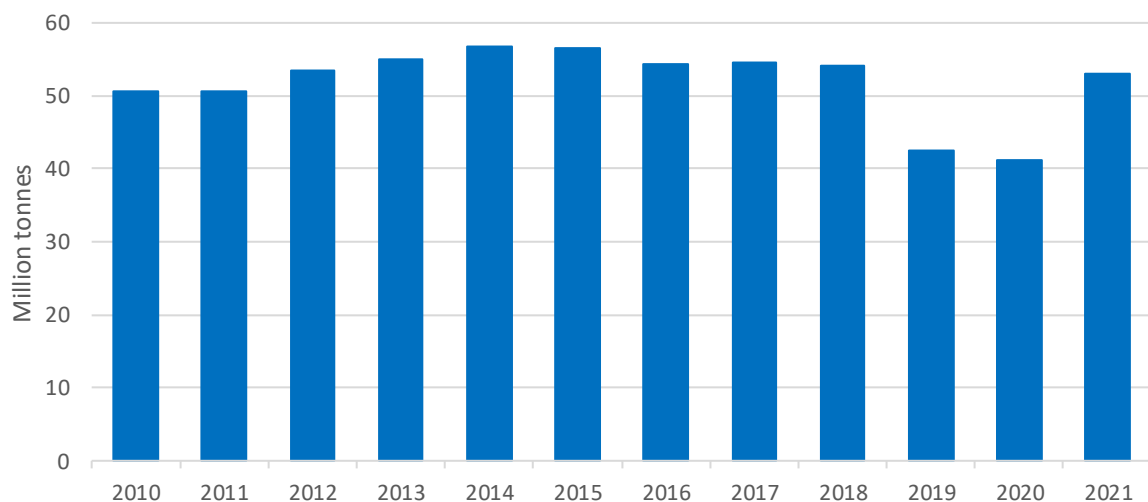
**Figure 14: World production of top meat commodities**



**Source:** FAO. 2022. FAOSTAT: Production: Crops and livestock products. In: FAO. Rome. Cited December 2022. <https://www.fao.org/faostat/en/#data/QCL>

China, mainland is the global leader in pig meat production, accounting on average for 45 percent of the global production between 2010 and 2021. In 2018–2019, the African swine fever epidemic wiped out about 21 percent of the local pig population, and domestic pig meat production dropped by 11 million tonnes (Figure 15), which also affected local prices. The decline in Chinese pig meat production continued in 2020 but was partially offset by other global producers, and in 2021 China returned to levels just below those of 2018. Considering that domestic pig stocks bottomed out in 2019 and only started to rise again in 2020, the 2021 data confirmed the recovery, showing good prospects for stabilizing domestic supply and prices.

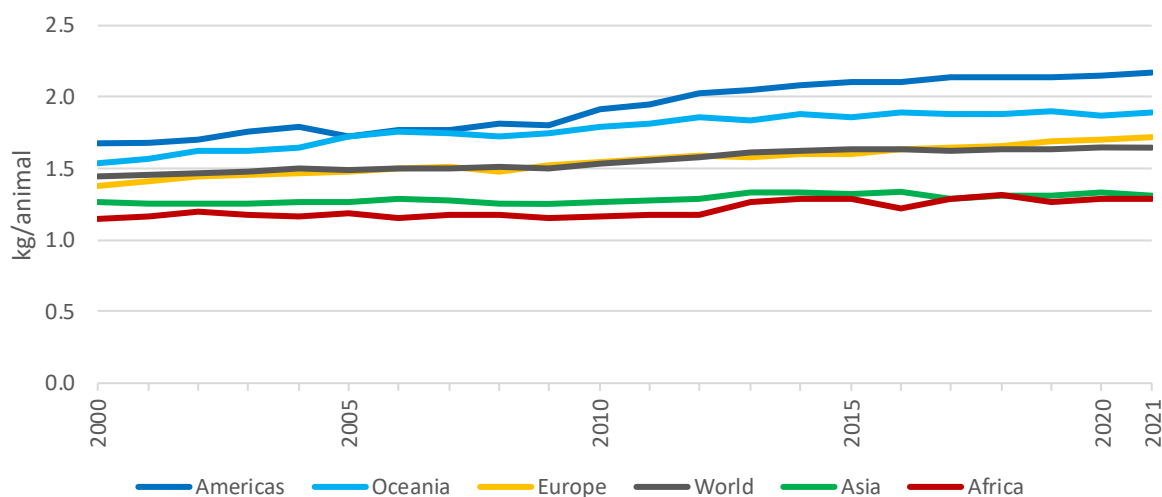
**Figure 15: China pig meat production**



**Source:** FAO. 2022. FAOSTAT: Production: Crops and livestock products. In: FAO. Rome. Cited December 2022. <https://www.fao.org/faostat/en/#data/QCL>

The production data show that the average weight of chickens raised for their meat grew by 23–30 percent between 2000 and 2021 in the Americas (to 2.2 kg/animal), Oceania (to 1.9 kg/animal) and Europe (to 1.7 kg/animal), compared to just 3 percent in Asia and 12 percent in Africa (to 1.3 kg/animal in each region); the world average increased by 14 percent to 1.6 kg/animal (Figure 16). This phenomenon highlights the continuing intensification of farming practices and is related to concerns over the sustainability of animal breeding and meat quality.

**Figure 16: Chicken meat carcass weight by region**

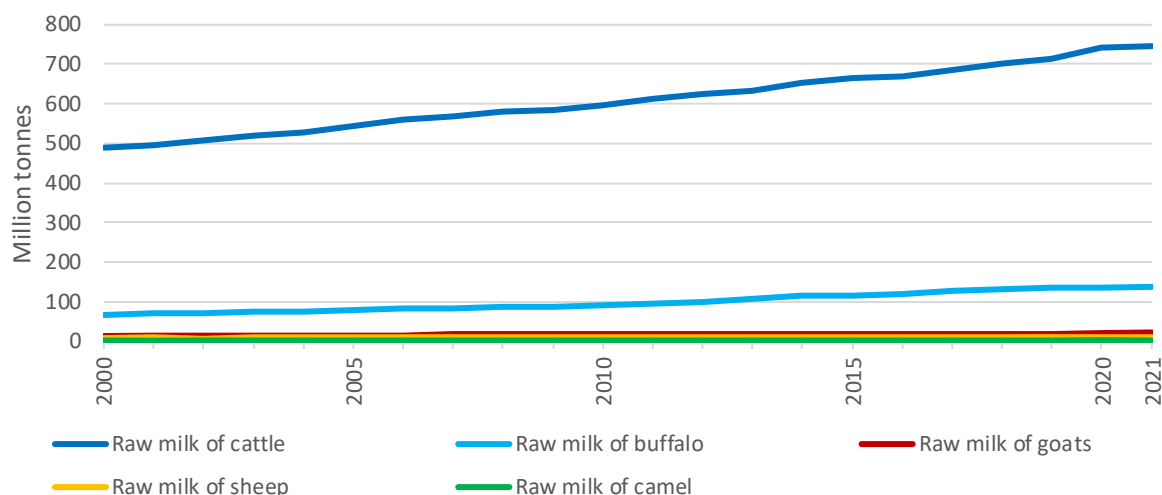


**Source:** FAO. 2022. FAOSTAT: Production: Crops and livestock products. In: *FAO*. Rome. Cited December 2022. <https://www.fao.org/faostat/en/#data/QCL>

## MILK

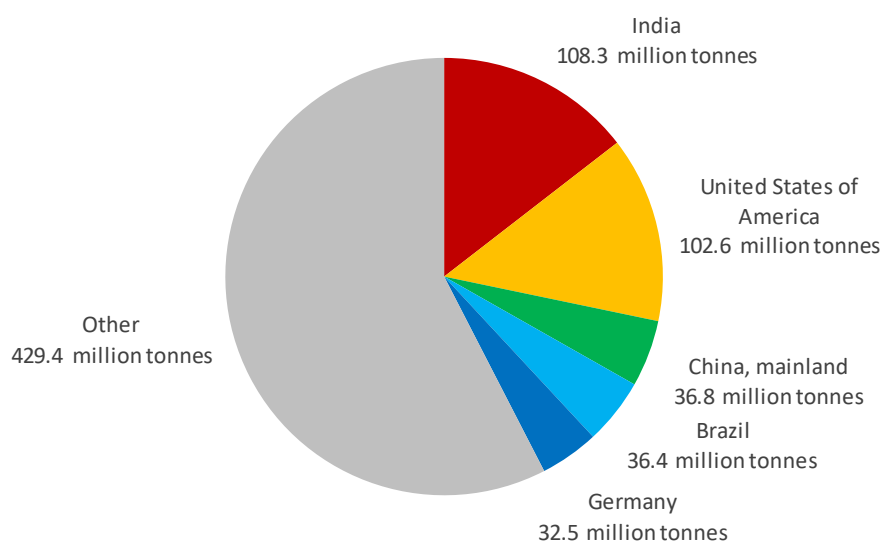
Raw milk of cattle accounted for the largest, although declining, share of total milk production between 2000 and 2021: 84 percent (489 million tonnes) in 2000 compared to 81 percent (746 million tonnes) in 2021. The share of raw milk of buffalo instead increased from 11 percent in 2000 to 15 percent in 2021, leading to a stable share of raw bovine milk in total production (96 percent). The raw milk from other livestock categories maintained low levels below 2 million tonnes (Figure 17). India, the United States of America and China are the top three producers of raw milk of cattle (Figure 18), accounting for 108, 103 and 37 million tonnes, respectively.

**Figure 17: Global production of raw milk by product**



**Source:** FAO. 2022. FAOSTAT: Production: Crops and livestock products. In: *FAO*. Rome. Cited December 2022. <https://www.fao.org/faostat/en/#data/QCL>

**Figure 18: World production of milk of cattle in 2021, top producers**

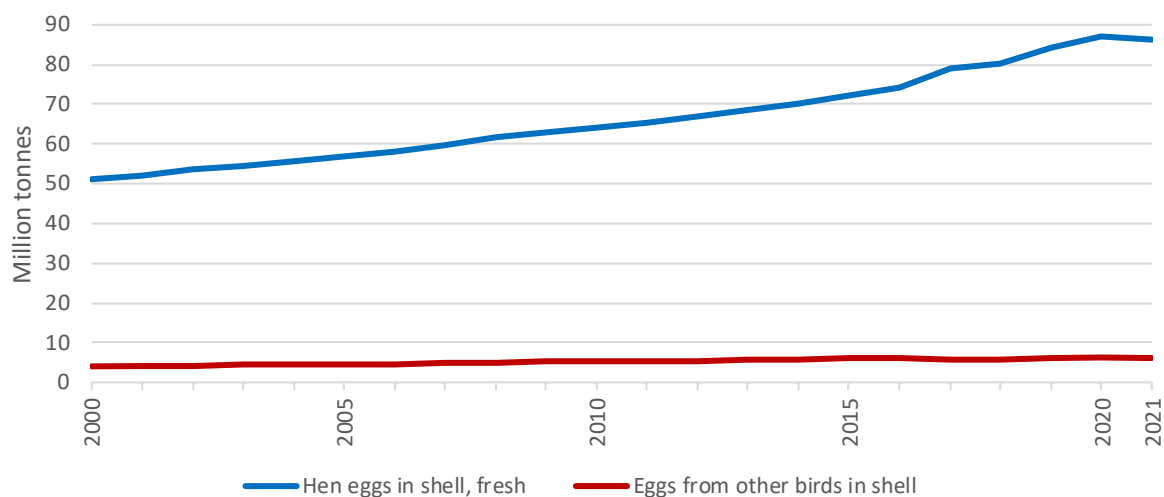


**Source:** FAO. 2022. FAOSTAT: Production: Crops and livestock products. In: *FAO*. Rome. Cited December 2022. <https://www.fao.org/faostat/en/#data/QCL>

## EGGS

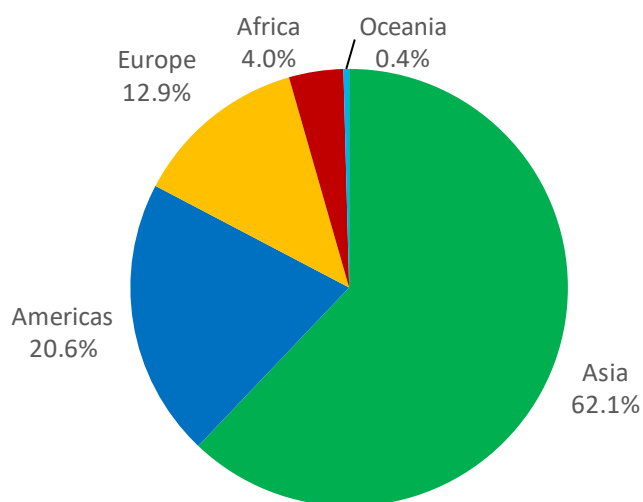
In 2021, world egg production reached 93 million tonnes, a 68 percent increase compared to 2000. Hen eggs accounted for 92–93 percent of the global egg production since 2000; their production slightly declined (-0.7 percent) in 2021 to 86 million tonnes, interrupting the steady growth exhibited since 2000 (Figure 19). Asia was by far the main producing region of hen eggs in 2021 (Figure 20), accounting for 62 percent of the global production, followed by the Americas (21 percent), Europe (13 percent), Africa (4 percent) and Oceania (0.4 percent).

Figure 19: Global production of eggs by product



**Source:** FAO. 2022. FAOSTAT: Production: Crops and livestock products. In: *FAO*. Rome. Cited December 2022. <https://www.fao.org/faostat/en/#data/QCL>

Figure 20: World production of hen egg by region in 2021



**Source:** FAO. 2022. FAOSTAT: Production: Crops and livestock products. In: *FAO*. Rome. Cited December 2022. <https://www.fao.org/faostat/en/#data/QCL>



## EXPLANATORY NOTES

The agricultural production domain covers data on crop and livestock commodities from production volumes to harvested areas and animal slaughtering rates. In addition, data for some selected processed crop and livestock products, synchronized and derived from the Food Balance Sheets domain, are also available up to the year 2020. Crop and livestock statistics are recorded for 278 products, covering the following categories: 1) crops primary, 2) crops processed, 3) live animals, 4) livestock primary and 5) livestock processed.

The main data source is official statistics from FAO member countries, collected either through annual production questionnaires distributed to countries, from national publications or from official country websites. The source data can originate from surveys, administrative data and estimates based on expert observations. The type of source used by countries can significantly affect the reliability and comparability of data. In instances where no official data is available, data from unofficial sources (as specialized international commodity institutes such as Oil World or the US Department of Agriculture) may be used. If no data from either official or unofficial sources are available, data are imputed. Data on the primary commodities for members of the European Union are obtained from Eurostat (with some minor exceptions) from the year 2018.

This analytical brief was prepared by Salar Tayyib, Irina Kovrova and Livia Lombardi with inputs from Olivier Lavagne d'Ortigue.

Required citation: FAO. 2022. *Agricultural production statistics. 2000–2021*. FAOSTAT Analytical Brief Series No. 60. Rome. <https://doi.org/10.4060/cc3751en>

Cover photo: ©FAO/Than Rathany

### CONTACTS

Statistics – Economic and Social Development

E-mail: [statistics@fao.org](mailto:statistics@fao.org)

[www.fao.org/food-agriculture-statistics/en/](http://www.fao.org/food-agriculture-statistics/en/)

**Food and Agriculture Organization of the United Nations**

Rome, Italy

© FAO, 2022



Some rights reserved. This work is available under a CC BY-NC-SA 3.0 IGO licence