6 Meat

This chapter describes market developments and medium-term projections for world meat markets for the period 2023-32. Projections cover consumption, production, trade and prices for beef and veal, pigmeat, poultry, and sheepmeat. The chapter concludes with a discussion of key risks and uncertainties which have implications for world meat markets over the next decade.

6.1. Projection highlights

Inflation dampens growth in demand in the early years

The *Outlook* expects downward pressure on the growth of meat demand amid high and rising consumer costs and weak income growth. This is anticipated to persist in the early years of the *Outlook,* with reduced purchasing power, despite the government household support offered in some countries. Consumers are expected to shift spending priorities to limit the overall purchase of meat, which constitutes a sizeable share of the food basket in middle- and high-income countries. This may include, *inter alia*, a shift toward cheaper meats and meat cuts, as well as reduced out-of-home food expenditures.

Over the projection period, it is expected that global average per capita demand for meat will increase by 2%, from the 2020-2022 base period to 2032. Consumption growth in middle-income countries will account for a significant share of this increase (Figure 6.1). As noted in last year's *Outlook*, disposable income in high-income countries is no longer a main determinant of changes in meat consumption. Instead, concerns about human health, environmental impacts and animal welfare are the main motivations prompting consumers in these countries to shift towards a diet that shifts demand among meat products (e.g. red vs white meat) or reduces overall meat demand. In middle-income countries, where economic growth, urbanization, and the growth of the fast-food industry progresses, more significant changes in the consumer meat choices are anticipated. In low-income countries, high population growth is expected to remain the key driver of higher meat consumption. However, limited access at relatively low income levels will continue to constrain growth in per capita meat consumption, which is only 15% of the average in high-income countries.

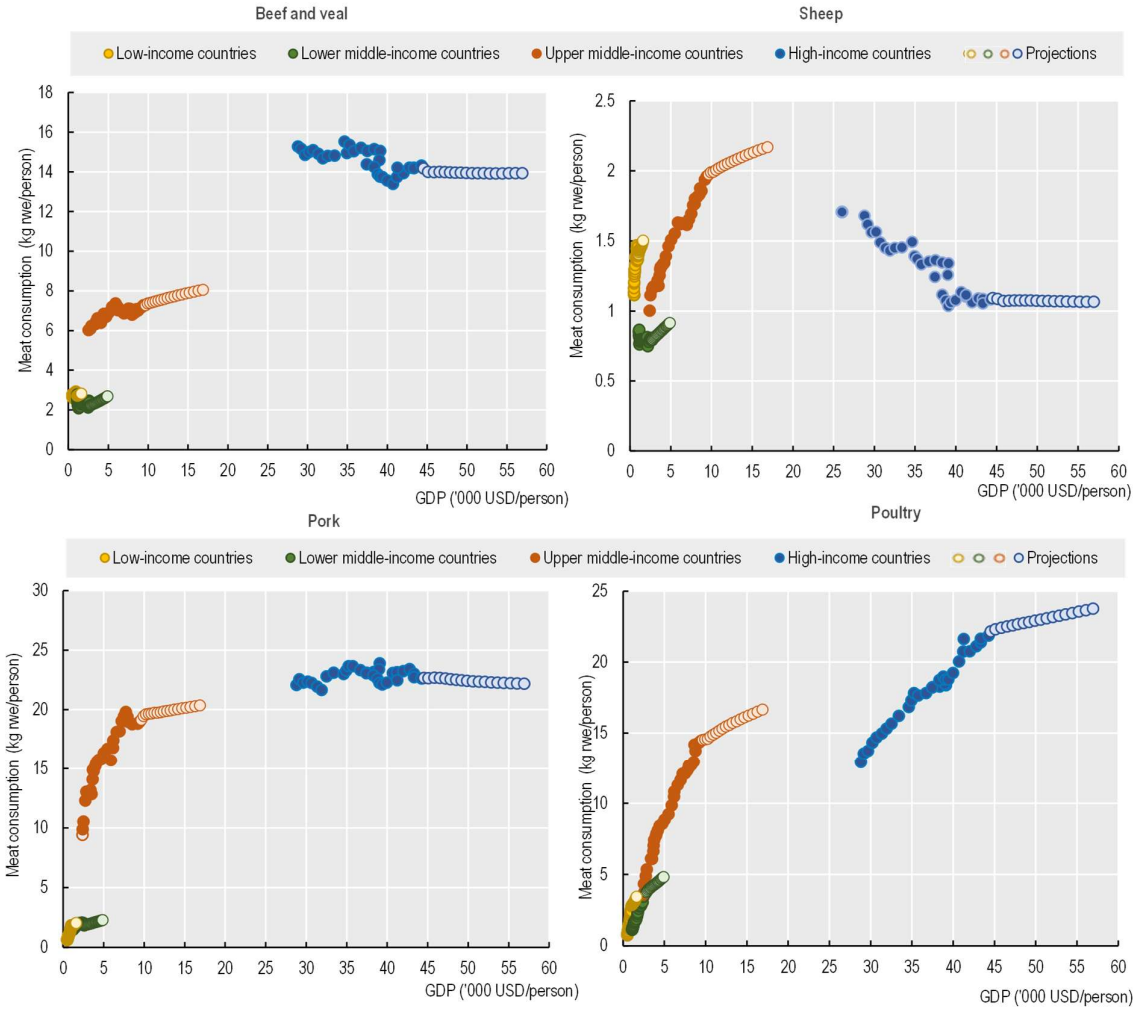
The structure of global meat markets in recent years was affected by the significant decline in pigmeat consumption due to the outbreak of African Swine Fever (ASF) in the People's Republic of China (hereafter "China"), that started in 2018. The *Outlook* projects its per capita consumption to return to the level preceding the outbreak by 2023, as the impact on domestic availability abates and per capita consumption returns to its longer-term trend. The modernisation of the supply chain and improved genetics, combined with increasing investment in large-scale production units, will reduce production costs and increase productivity, and support a rebound in Chinese meat consumption.

Growth in meat supply will expand to meet modestly rising demand

Global herd and flock expansion, combined with continuous improvements in animal breeding, management, infrastructures, and technology will increase production over the outlook period, particularly in upper middle-income countries (+14%). These countries will drive the growth in global meat production to reach 382 Mt (+12%) by 2032. Nevertheless, high inflation and rising costs early in the projection period will limit the medium-term growth per annum (p.a.) to a slower pace (1% p.a.) than in the last decade (1.2% p.a.).

Global meat production will be mainly driven by growth in poultry meat and a significant increase in pigmeat production assuming ongoing recovery from the major outbreaks of ASF in Asia in the first years in the coming decade. The recovery in pigmeat production in the Philippines and Thailand is assumed to be completed by 2026. The various outbreaks have highlighted the need to implement a comprehensive policy approach that combines biosecurity measures, surveillance, compensation, import/export regulations, and the development of a vaccination programme to successfully control and recover from ASF.

Figure 6.1. Growth in Gross Domestic Product (GDP) and change in per capita consumption for meat, 1990 to 2040



Note: Per capita consumption beyond 2032 is extended based on trends. The 38 individual countries and 11 regional aggregates in the baseline are classified into four income groups according to their respective per-capita income in 2018. The applied thresholds are: low: < USD 1 550, lower-middle: < USD 3 895, upper-middle: < USD 13 000, high > USD 13 000.
Source: OECD/FAO (2023), "OECD-FAO Agricultural Outlook", OECD Agriculture statistics (database), http://dx.doi.org/10.1787/agr-outl-data-en.

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Lower growth in trade as domestic supplies rise in importing countries

The main features of the global meat trade will be the ongoing reduction in China's meat imports, which is expected to be offset by a growing demand from middle-income countries in Asia that shift toward diets that include higher shares of animal products, and from low-income countries with high population growth. On the other hand, rising domestic production in several other countries including Iran, the Russian Federation, Saudi Arabia, South Africa, Viet Nam, and in particular countries in Latin America, is likely to

dampen the growth of their meat imports in the medium term. As a result, the global meat trade will expand by only 0.7% p.a., much slower than in the last decade.

Lower feed costs and productivity gains bring prices down in real terms

This *Outlook* projects that while nominal meat prices remain high, they are anticipated to be soften in 2023 and continue to decline modestly in real terms over the next decade with weaker demand, lower feed costs (in real term), and ongoing productivity growth. As feed prices decrease and consumer spending on meat recovers in middle-income countries, particularly for poultry and pigmeat, overall meat prices will return to their long-term trend levels. However, demand growth for red meat products, particularly in middle-income countries, combined with lower productivity gains, will keep their prices in real terms relatively more expensive over the outlook period.

Animal disease outbreaks are significant risks in the meat sector

The meat sector faces various uncertainties, including changing consumer preferences, public health concerns, climate impacts, international trade policies, and animal welfare concerns. With relatively large income elasticities, meat demand remains sensitive to macroeconomic conditions, particularly in emerging developing countries. On the supply side, recent animal diseases such as African Swine Fever (ASF) and Avian Influenza (AI) have disrupted supply chains and resulted in the culling of large numbers of animals. These outbreaks have also led to trade restrictions and reduced demand for meat products due to public health concerns. The uncertainties related to animal diseases highlight the importance of collaboration between government and industry stakeholders in investing in biosecurity measures and effective treatments to ensure the sector's sustainability.

6.2. Current market trends

International market prices rise due to limited supplies

Global meat production is estimated to have grown 1% to 347 Mt cwe in 2022. Several factors limited growth, including animal diseases, high and rising input costs, and extreme weather events. The expansion was driven primarily by increased output in Asia, specifically a rise in pigmeat production in China for a second year. In North and South America, production remained relatively stable, while it declined in Europe and Oceania. Generally, the industry’s profitability improved somewhat toward the end of 2022 as the cost for input such as energy, animal feed, and fertilisers abated. However, disruptions due to animal diseases continue to disrupt meat production in many large-producing countries, with resulting trade restrictions.

In 2022, global meat exports declined by 3% to 40 Mt, primarily due to production shortfalls and higher internal demand in major exporting countries, including Brazil, Canada, the European Union, the United States and New Zealand. In addition, pigmeat imports in ASF recovering regions also contracted as their domestic supplies recovered. However, some countries, including Australia, China, India, Thailand, and Türkiye, experienced a year-on-year increase in meat exports.

With lower export supplies, the FAO meat price index rose to average 118.8 in 2022, an increase of 10% from the previous year. Despite this increase, meat-to-feed price ratios remained low, squeezing profitability in intensive feed-grain livestock operations at the start of the *Outlook* period.

6.3. Market projections

6.3.1. Consumption

Meat demand is only expanding marginally in high-income countries

Meat consumption patterns of consumers in most high-income countries (which represent 33% of total meat consumption for 16% of population in 2022) have started to stagnate, with changes mostly based on the type and quality of the meat consumed. However, due to their lower base intake and more rapid increases in population and incomes, growth will be generated primarily from low- and middle-income countries.

Worldwide, poultry, pigmeat, beef, and sheepmeat consumption is projected to grow 15%, 11%, 10%, and 15% respectively by 2032. Poultry meat is expected to account for 41% of the protein consumed from all meat sources in 2032, followed by pig, bovine and ovine meat. The overall growth in the volume of meat consumption, aside from the United States, Brazil and China, is expected to be greater in low-income countries, especially India, Pakistan, the Philippines, Viet Nam, and the Sub-Saharan region of Africa.

On a per capita basis, global meat consumption is set to rise by 2%. This increase of 0.7 kg/year/person on an edible retail weight equivalent basis (hereafter “rwe”) by 2032 is similar to the previous decade and, again, is mainly due to the increase in the consumption of poultry meat (Box 6.1). Globally, there is a growing trend among consumers to become increasingly sensitive to animal welfare, environmental and health concerns, and poultry has the least carbon footprint. In some instances, these shifts in preferences may lead to shrinking per capita meat consumption, as in the case of the European Union, for which the *Outlook* foresees an ongoing substitution of beef and pigmeat by poultry meat.

Box 6.1. Edible retail weight

This *Outlook* introduces a new second-level conversion factor to standardise meat products at different levels of the food chain. The first level converts live animal weight (lw) to carcass weight equivalent (cwe), commonly used as a basis for meat statistics. The cwe unit only includes the meat, fat, and carcass bones. The live to carcass weight conversion factor can vary based on various factors such as age, sex, breed, environment, and diet of the live animal. National authorities typically use representative conversion factors for their production, consumption, and trade statistics, compiled by their national statistics institutes. A second-level conversion factor is employed to obtain a more accurate figure of the edible portion of the carcass, eliminating the non-edible parts. The carcass undergoes further trimming, deboning, and processing to calculate a boneless retail weight equivalent (rwe). However, the values for converting a carcass into edible equivalents can fluctuate significantly depending on the region, chosen methodology, processing techniques and the desired end product. The *Outlook* applies the following standardised conversion factor to the carcass weight equivalent to derive the relevant rwe.

	Carcass weight to boneless retail weight %
Beef	67
Pigmeat	73
Poultry	60
Sheep	66

Source: USDA, ERS - Loss-Adjusted Food Availability (LAFA).

Global poultry consumption is projected to increase to 91 Mt rwe, accounting for nearly half of the additional meat consumed. The global increase in protein from poultry consumption as a share of total protein from meat has been the main feature in the growth in meat consumption for decades, this trend is expected to continue (Figure 6.2). This is due to several factors, particularly the lower price of poultry compared to other types of meat and that it contains a healthy combination of protein and low fat.

Environmental considerations also contributed to the shift towards poultry meat, as the production of red meat is often resource-intensive and can lead to high greenhouse gas emissions. On the other hand, poultry production is generally considered more efficient and less resource-intensive, making it a more sustainable choice for meat.

The increase in poultry consumption in the last decade was driven by rising consumption in Asia, particularly in China, India and Indonesia, Pakistan and the Philippines. These trends will continue, but consumption is projected to grow rapidly in other regions, including Brazil, Sub-Saharan Africa and the United States, reflecting poultry's significant and increasing role in diets worldwide.

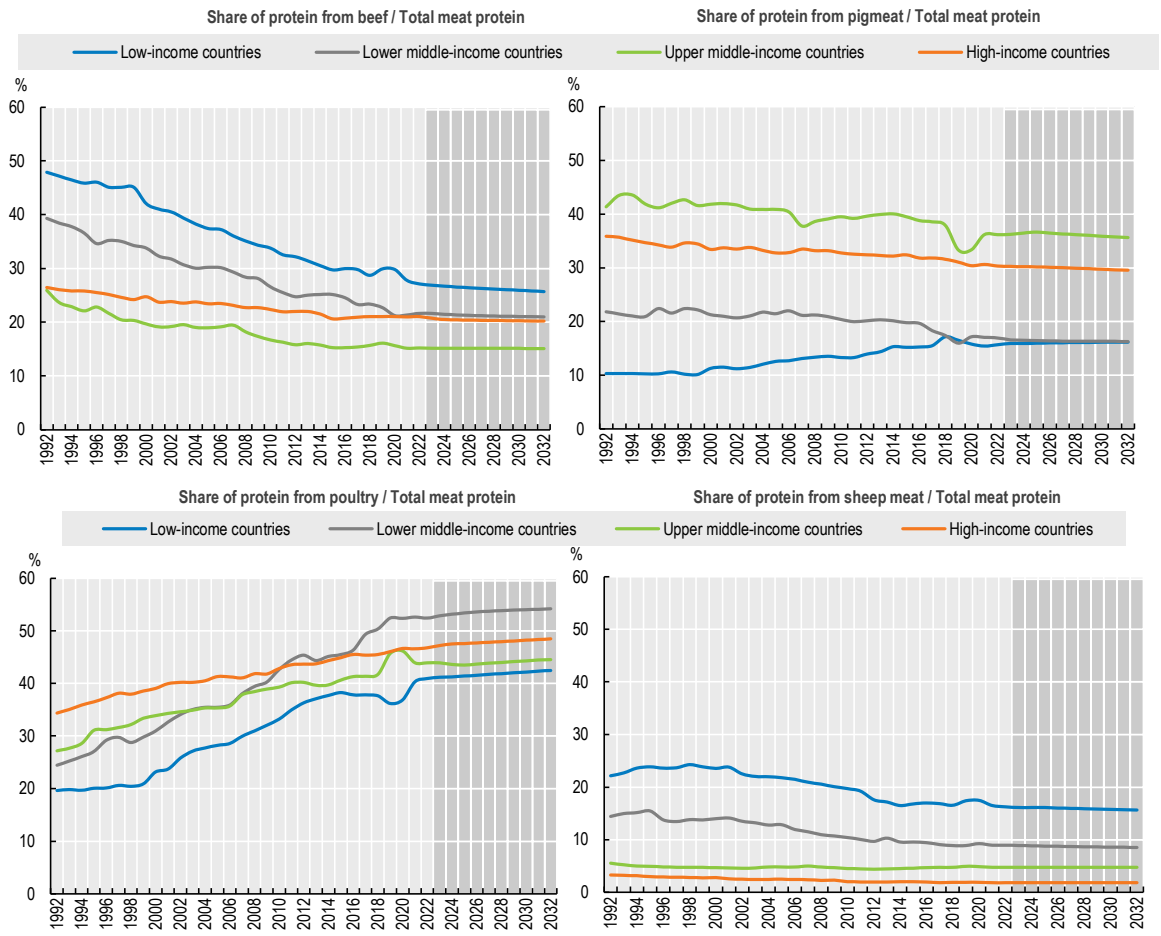
Over the next decade, global pigmeat consumption is also projected to grow globally, apart from Europe, where consumption is already high, and health, environmental and societal concerns significantly impact consumer choice. However, pigmeat will remain the most widely consumed meat in the European region. Pigmeat will be the second largest contributor to the total growth in meat consumption and is projected to reach 93 Mt rwe by 2032. However, in per capita terms, this growth will be stagnant over the projection period. In Latin American countries per capita consumption is projected to increase, due to favourable relative pigmeat/beef prices. Elsewhere, per capita demand is anticipated to be stagnant or decline.

Global beef consumption is projected to reach 51 Mt rwe over the next decade. Global per capita consumption has fluctuated around 6 kg per capita rwe for the last decade and is expected to remain stable over the outlook period. Most regions are projected to reduce their beef intake apart from the Asia-Pacific region, where per capita beef consumption is projected to increase by 0.4 kg/year rwe.

There are growing concerns about the environmental impact of beef production, which is perceived as a significant contributor to greenhouse gas emissions. In addition, deforestation caused by land-use changes for grazing and feed production is also concerning. As a result, many consumers have chosen to reduce their beef consumption in favour of poultry meat which has a smaller environmental footprint. North America and Oceania, which historically have strongly preferred beef, are expected to see the most significant decrease in per capita consumption. In contrast, China, the world's second-largest beef consumer although relatively low in per capita terms, is projected to see a further 0.8 kg/year rwe increase in its per capita consumption by 2032. This is partly due to a growing middle class in China, which has increased demand for meat, including beef.

While sheepmeat consumption is a relatively small part of the global meat market, it remains an essential source of protein for many consumers, particularly in the Middle East and North Africa. While some change is occurring in global dietary patterns, the contribution of sheepmeat to total protein from meat is projected to remain stable (Figure 6.2). It is mainly a traditional (cultural) food choice, although competition from beef and poultry ensures the latter are often more widely available and cheaper than sheepmeat.

Figure 6.2. Share of proteins for each meat type in total meat proteins consumption



Note: Per capita consumption. The 38 individual countries and 11 regional aggregates in the baseline are classified into four income groups according to their respective per-capita income in 2018. The applied thresholds are: low: < USD 1 550; lower-middle: < USD 3 895; upper-middle: < USD 13 000; high > USD 13 000.
Source: OECD/FAO (2023), "OECD-FAO Agricultural Outlook", OECD Agriculture statistics (database), http://dx.doi.org/10.1787/agr-outl-data-en.

StatLink 2 https://stat.link/92gbvp

Will meat demand fall in the long term?

Rising meat consumption has raised concerns for long term sustainability, given its pressure on global resources and contribution to GHG emissions. The *Outlook* assumes that consumer preferences will evolve slowly and does not anticipate a significant change in the current trend over the next decade. The implications for GHG emissions are broadly consistent with those of the IPCC. Looking beyond the medium term into the longer term, demographic trends, human health, animal welfare, and environmental concerns may negatively impact meat consumption. Efforts to reduce food loss and waste (FLW), could also lead to a reduction in meat consumption and production (Box 6.2).

Box 6.2. Meat sector food loss and waste

Global perspectives for the meat sector point to the dilemma between meeting consumers' growing demands on the one hand and being environmentally sustainable on the other hand. The production of meat and meat products significantly impacts the environment, accounting for around 3.8 gigatons of CO2 equivalent[1] per annum. This has led to a growing concern over the sustainability of the meat sector and the need to balance consumer demand with environmental sustainability. One of the solutions to tackle the sustainability of the meat sector is to reduce food loss and waste, which applies to meat products across all regions. While estimates of food loss and waste differ depending on the methodology used, recent research suggests that this could be advanced by developing regional experience on loss and waste at the production and storage levels, especially as these losses are likely to vary across regions of the world. Compared to low-income countries, in industrialised areas, loss and waste occur towards the end of the food chain.

For example, in the European Union, 23% of production in the meat sector, taken together at all stages of the food chain, is estimated to be lost and wasted. The method for accounting is the mass flow analysis. The consumption level accounts for 64% of total food waste, followed by manufacturing (20%), distribution (12%), and primary production and post-harvest (3.5%). Aside the amount of food that can be saved from losses, there is a potential to reduce GHGs from the meat sector or to increase production with the same climate impact. For example, in 2020 Sweden beef, pigmeat and milk on farm losses represented 9% of GHGs from animal husbandry.[2]

Various measures have been adopted to address these issues, including promoting dietary solutions to reduce meat consumption and reducing loss and waste through technological improvements, product innovation, or the development of more differentiated sales channels to increase the value of different meat parts including their non-edible portions.[3] Such measures can lead to higher efficiency and reduce the need for more animal production to meet the increasing demand for meat, thus addressing both demand and sustainability issues.

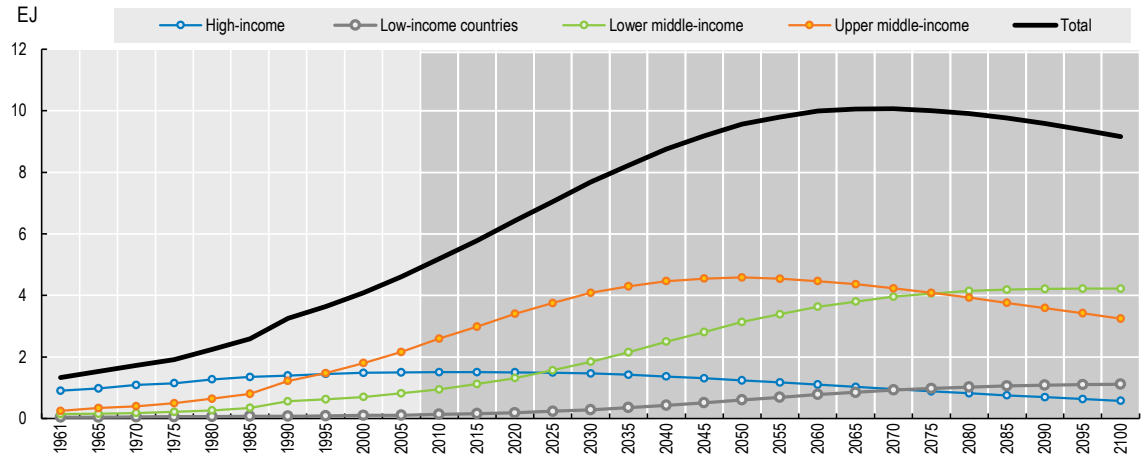
Notes

1. Gerber, P.J., H. Steinfeld, B. Henderson, A. Mottet, C. Opio, J. Dijkman, A. Falcucci, and G. Tempio (2013), *Tackling climate change through livestock – A global assessment of emissions and mitigation opportunities*, Food and Agriculture Organization of the United Nations (FAO), Rome.
As indicated by Gerber et al., food animal production all over the world contributes 7.1 gigatons of CO2 equivalent. The largest share in the formation of greenhouse gases has beef production (35.3%), followed by swine (9.5%) and poultry (8.7%).
2. Lindow et al. Jordbruksverket, *Rapport 2022:19 Losses of pork, beef and milk at farm level.*
3. While these portions are not consumed directly by humans, they can still have value and uses within the broader food and agricultural industry.
Source: Karwowska, M., S. Łaba, K. Szczepanski (2021), "Food Loss and Waste in Meat Sector—Why the Consumption Stage Generates the Most Losses?" *Sustainability*, Vol. 13, 6227. https://doi.org/10.3390/su13116227.

As discussed in last year's meat chapter of the *Outlook,* empirical data on consumer behaviour in low-income countries indicates that when income rises beyond a certain level, the proportion of meat protein in the diet increases. As populations and incomes grow, global food demand analysis suggests that low-income groups will consume a greater share of animal-based calories. However, the relationship between income and animal product consumption becomes less clear for higher-income groups.

Long-term scenario analysis, as illustrated in Figure 6.3, reveals that upper middle-income countries will drive the increase in demand until 2040. After that, lower middle-income countries will lead, causing demand to grow until 2075. At some point during the remainder of the twenty-first century, global meat demand may begin to decline. Nevertheless, resource and environmental constraints could limit further growth in meat supply and demand, potentially causing the turning point to arrive earlier.

Figure 6.3. Total animal-based food energy demand projections per region over time in EJ



Notes: The Intergovernmental Panel developed the four Special Report on Emissions Scenarios on Climate Change (IPCC). The graph shows the B2 middle-of-the-road emissions scenario, which has a balanced approach of slow economic growth, modest population growth, some technological advances, and social and environmental sustainability.
EJ (Exajoule) is an energy unit. It's equivalent to 1 EJ = 10^{18} Joules per year
Source: Bodirsky B.L., S. Rolinski, A. Biewald, I. Weindl, A. Popp, H. Lotze-Campen (2015), "Global Food Demand Scenarios for the 21st Century", *PLoS ONE*, Vol.10 (11): e0139201, https://doi.org/10.1371/journal.pone.0139201.

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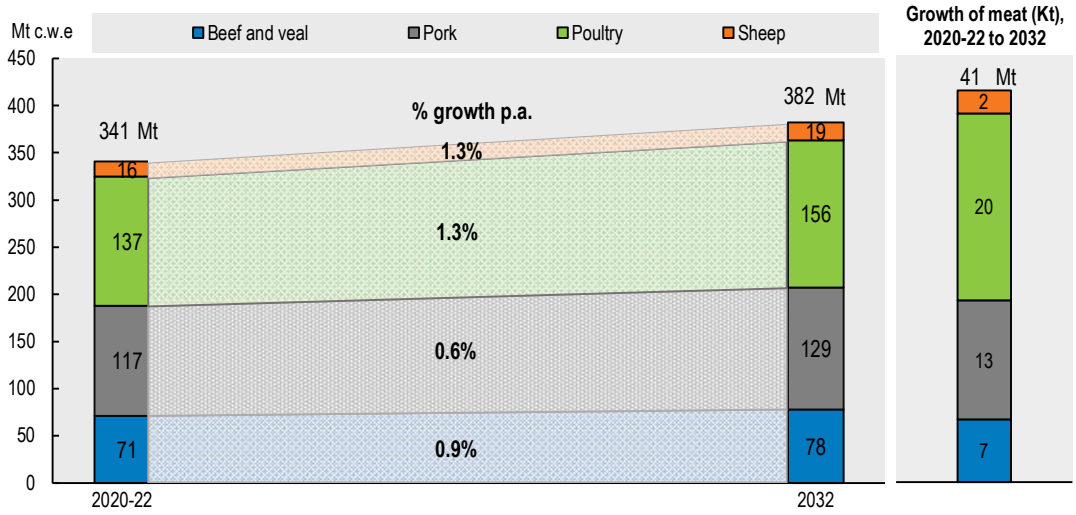
6.3.2. Production

High feed and labour costs are slowing growth

According to projections, world meat production is expected to increase by 41 Mt cwe to an estimated 382 Mt cwe by 2032, with most of the growth occurring in Asia, led by a 20 Mt increase in poultry production (Figure 6.4). In China, the rise in pigmeat production will offset the projected decline in European output, impacted by factors such as ASF outbreaks, stricter environmental laws, and animal welfare regulations in some EU countries. The ASF outbreak continues to impact Asia, mainly in the Philippines and Thailand and will continue to do so in the early years of the outlook period (Figure 6.7).

In recent years, high feed and labour costs have been significant challenges for meat producers worldwide. Feed costs are a significant share of the total cost of meat production, particularly for monogastric animals such as poultry and pigs[1] (Figure 6.5). This means that fluctuations in feed prices can have a marked impact on meat producers' profit margins. Similarly, rising labour costs[2] make it more difficult for meat producers to expand their operations increasing their financial risk, especially at the beginning of the outlook period, when inflation and interest rates are assumed to remain high.

Figure 6.4. Growth of meat production by meat type, 2032 vs. 2020-22



Source: OECD/FAO (2023), "OECD-FAO Agricultural Outlook", OECD Agriculture statistics (database), http://dx.doi.org/10.1787/agr-outl-data-en.

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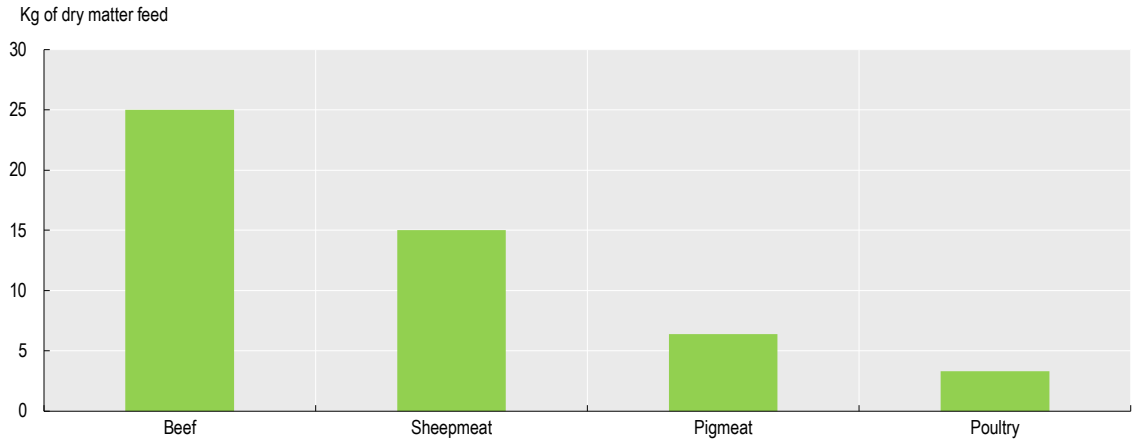
Figure 6.5. Kilogram of dry matter feed required per kilogram of edible weight, 2013



Note: The nutritional requirements of monogastric livestock (i.e. poultry and pigs) were assumed to be met solely from feed, while nutrients for ruminant species (e.g. cattle and sheep) come from feed and grazed pasture.
Source: Livestock conversion efficiencies are given as reported Alexander et al. (2016), "Human appropriation of land for food: The role of diet", *Global Environmental Change*, 41, pp. 88-98.

StatLink 2 https://stat.link/zatln9

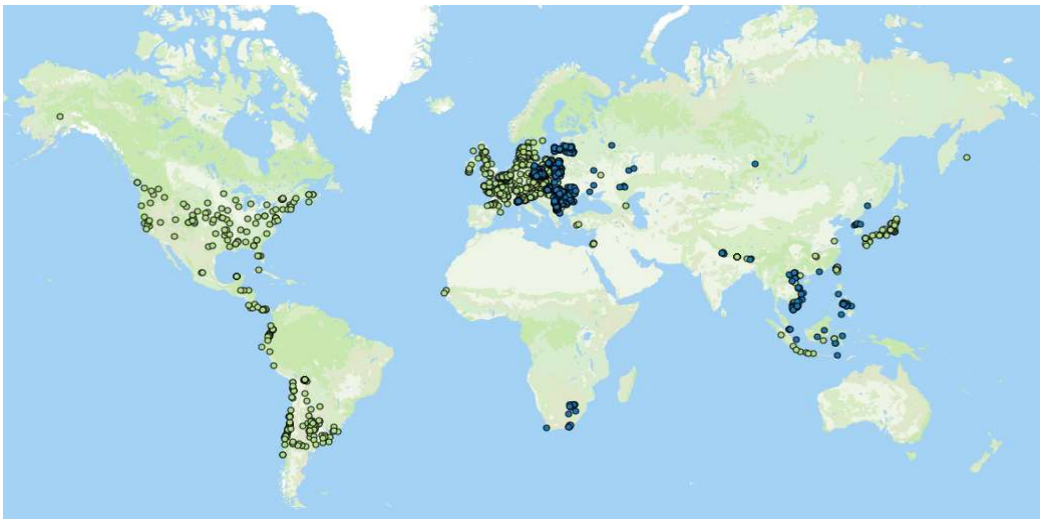
Poultry will increase its dominance within the meat complex, accounting for half of all additional meats produced in the next decade. Poultry production will expand rapidly in countries with a surplus of feed grains, such as Brazil and the United States. Expansion is also foreseen in Asia as the shift away from pigmeat triggered by ASF outbreaks has benefitted poultry, particularly in China in recent years. In India, Türkiye and Indonesia, the poultry industry remains one of the fastest growing segments of the agricultural

sector, primarily driven by the expanding demand for animal protein and the rising utilisation of eggs for the bakery and confectionery sectors. Poultry has advantages over other meats in terms of production length, costs, feed conversion ratio, and proximity to growing urban markets.

However, a high density of poultry production may lead to disease issues. For example, ongoing outbreaks of highly pathogenic avian influenza (HPAI) affect poultry and egg production in many countries (Figure 6.6.). However, outbreaks are easily detected due to high mortality rates and clinical signs associated with the disease. This allows for the rapid implementation of control measures and effective vaccines to prevent their spread. In addition, once contained, the short poultry production cycle allows for quick recovery. As a result, the outlook does not assume that HPAI will impact the medium term projection.

Figure 6.6. Animal diseases around the world

January 2023-March 2023



Note: HPAI: Green dots; ASF: Blue dots.
Source: © FAO (2023) Animal disease [https://data.apps.fao.org/] (Accessed March 2023).

While a range of factors has driven the shift towards poultry, its production also faces environmental and health challenges, particularly regarding antibiotic use and animal welfare. Therefore, promoting sustainable and responsible poultry production practices will be critical to the long-term growth of the sector.

In several European countries, pigmeat output will decline throughout the outlook period. This is because ongoing cost pressures in feed, energy, disease outbreaks (Figure 6.6) and current and future environmental regulations and welfare standards are part of the European Commission's Farm to Fork Strategy (such as the "End the Cage Age").

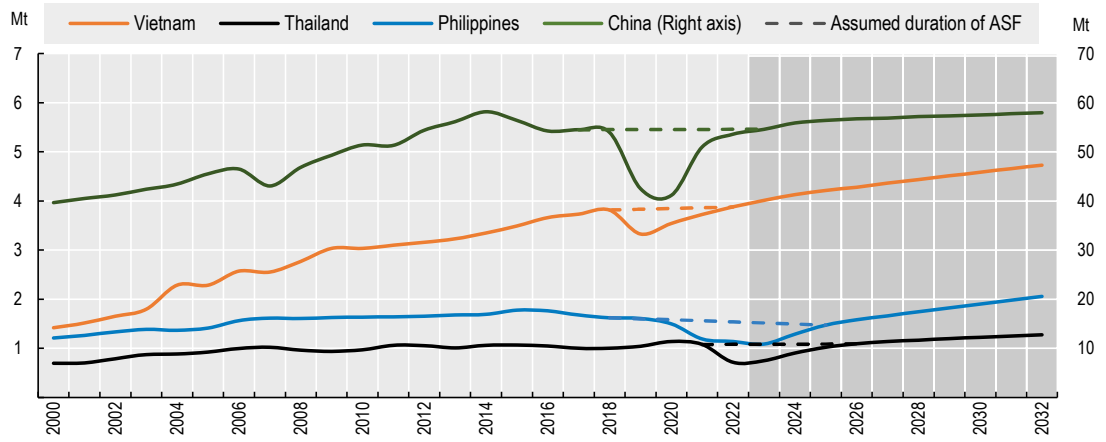
Asian ASF recovery is partly due to the modernisation of the sector

China's pigmeat production is assumed to recover, and its share of world production will return to the level of the last decade (45%) after reaching the pre-ASF level in 2023 (Figure 6.7). Viet Nam, which has suffered from ASF-reduced output since 2019, recovered faster as production was not as much affected, and it resumed its pre-ASF trajectory by 2022. As most ASF recovery in Asian countries affected by the disease is assumed to occur in the first half of the *Outlook* projection, global production is projected to

increase by 0.6% p.a. during the next decade. Most of the increase in pigmeat production will occur in the Asian ASF-affected regions where conversion from largely small-scale backyard holdings to large-scale commercial enterprises with higher biosecurity standards is taking place.[3]

Figure 6.7. Assumptions on the impact of African Swine Fever on meat production

Selected Asian countries



Source: OECD/FAO (2023), "OECD-FAO Agricultural Outlook", OECD Agriculture statistics (database), http://dx.doi.org/10.1787/agr-outl-data-en.

StatLink 2 https://stat.link/kcgsbt

Beef production will reach 78 Mt cwe by the end of the outlook period (Figure 6.3). The main contributors to this expansion are China's growth following technological improvements, better cattle management and genetics, and increasing milk production in Pakistan, where animals are used for milk and draft purposes. Türkiye will also be one of the main contributors to the production expansion as is expected from government intervention in the form of imports of livestock genetics, higher producer support, and interventions to offset high feed prices. In Australia, increasing slaughter capacity and profitability will trigger higher beef production over the outlook period.

Beef production will increase with higher carcass weights as feed costs decline and animal genetics are improved. Increased livestock slaughter numbers also contribute after multiple years of higher herd numbers in several African producing regions (particularly in Sub-Saharan) and Asia.

Sheepmeat production is anticipated to reach 19 Mt cwe by 2032 (Figure 6.4). Chinese production is projected to increase in response to high prices and contribute 17% of additional production. Increased availability in the global sheepmeat market will be due to flock rebuilding and increased lambing rates in Asia and Sub-Saharan Africa. Production in the European Union is projected to increase slightly from the current level due to production-coupled income support and favourable producer prices in the main sheep-producing Member States. The share of Africa in global sheepmeat production will slowly increase despite limitations linked to urbanisation, desertification, and feed availability in some countries. New Zealand's pledge to reduce GHG emissions is expected to constrain flock size as productive sheep land is converted into plantations for carbon credits.

6.3.3. Trade

Concentration of meat exports will decrease

Global meat exports are projected to rise 3% by 2032 from the base period, reaching 42 Mt cwe with almost 11% of meat output traded. Still, the growth in the meat trade is projected to decelerate compared to the past decade. Developed countries are still expected to account for more than half (55%) of global meat exports by 2032, a share which is 3% point lower than in the base period. However, the share of Brazil and the United States, each representing 20%, will remain stable over the projection period.

Australia and Türkiye are expected to record the most significant increase in world meat exports globally, benefiting from a favourable exchange rate and ample feed grain availability. Other traditional exporting countries, such as Argentina, Paraguay, and Thailand, are also expected to contribute to the increase in the global meat trade. On the other hand, the European Union export share will decline from 18% in the base year to 15% in 2032.

The most significant growth in import demand originates from Africa, which will account for the 78% of additional imports of all meat types. Asia, excluding China, is another fast-growing meat importing region. While Chinese meat imports remain high in the early part of the projection period, a gradual decline is projected as pigmeat production recovers from the ASF outbreak. In terms of composition, poultry will account for two third of the additional meat imports, bringing its share of total meat imports to 40% by 2032.

Australia and New Zealand will continue to lead global sheepmeat markets. Australia is expected to increase lamb exports (of higher value) to high end restaurants at the expense of mutton, while in New Zealand, exports will slowly decline as land use shifts from sheep farming. The source of higher import demand is the rising middle-class consumer in the Middle East.

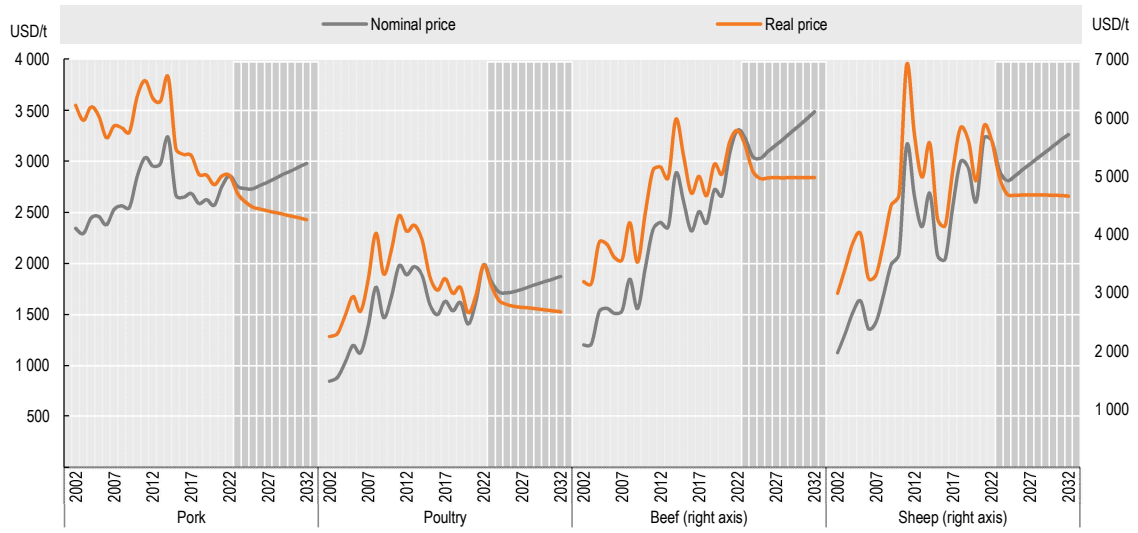
6.3.4. Prices

China is a key factor affecting meat prices

The *Outlook* projects that although meat prices are currently high, they are expected to decrease in both nominal and real terms at the start of the outlook period (Figure 6.8) under weaker demand and higher supplies as the impact of disease outbreaks wanes, particularly in China. The evolution of the situation in China impacts the world reference price of pigmeat and, to a lesser extent, that of other meats. In fact, at the start of the outlook period, the faster China recovers from ASF and lowers its meat imports, the lower prices will be in subsequent years.

As markets recover from these disruptions and consumer spending on meat in middle-income countries resumes, particularly for poultry and pigmeat, prices are expected to return to their long-term trend decline in real terms. As a result, by 2032, meat prices in real terms are projected to be 10% to 15% lower than their 2020-2022 averages. Moreover, red meat prices will be increasingly higher than pigmeat and poultry due to more limited productivity gains.

Figure 6.8. World reference prices for meat – rising in nominal, but falling in real terms



Note: Real prices are nominal world prices deflated by the US GDP deflator (2022=1). United States of America: Meat of Swine (Fresh, Chilled Or Frozen) export unit value USD/t, Brazil: Meat And Edible Offal Of Poultry (Fresh, Chilled Or Frozen), export unit value USD/t, Australia and New Zealand: Beef, mixed trimmings 85%, East Coast, FOB port of entry. USD/t, New Zealand: Lamb 17.5kg, USD/t cwe.
Source: OECD/FAO (2023), "OECD-FAO Agricultural Outlook", OECD Agriculture statistics (database), http://dx.doi.org/10.1787/agr-outl-data-en.

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6.4. Risks and uncertainties

Animal disease outbreaks remain the most significant risk in the meat sector

The meat sector faces several uncertainties in meeting the increasing demand for meat products while addressing concerns about animal disease, environmental sustainability, consumer preferences, animal welfare, public health and trade policies.

The livestock and meat sector often face severe economic impacts due to disease outbreaks. These disruptions have socio-economic costs, depending on the country and situation, including the loss of export markets, reduced imports from affected countries, or decreased consumer purchases due to health concerns. While these costs can be high globally, they can be mitigated by supplies from alternative disease-free markets or by following World Organization for Animal Health (WOAH) protocols that localise disease impacts on trade[4] (Box 6.3).

The ASF outbreaks in Asia have illustrated how disease outbreaks can affect domestic and international markets. In the European Union, the other producing region most affected by ASF outbreaks, a study[5] has suggested that an ASF outbreak can reduce the production of pigmeat, export quantities and the national pig inventory in the short and medium term. On average, new cases of ASF reduced the exports of pigmeat by close to 15%, production by more than 4% in the year after the cases occurred, and the national pig inventory by 3-4% in the current and the following year. However, only indirect effects on pigmeat prices, (such as the amount received in compensation and the market value), were observed.

After discovering the ASF virus in wild boars in Germany, several countries decided to suspend imports of German products. Exports to the usual international markets were thus mainly redirected to the European

market. The countries that accept German products have been unable to compensate for the loss in volume and value that occurred on the international markets. Germany's experience with the disease served as an object of study by the French Pork Institute (IFIP) to extrapolate the situation and estimate the potential economic impact of ASF on the French industry. The export market's estimated loss is between EUR 157 and EUR 364 million, underscoring the higher "market risks" associated with disease outbreaks.

The impact of climate change on livestock production, such the availability of feed, water, and other resources critical to livestock production, is gaining increased attention. Droughts, floods, and extreme weather events are expected to become more common, reducing productivity and increasing producer costs. A growing trend in consumer preferences is toward more healthy and environmentally conscious purchases, which may result in a shift away from traditional meat products and could have significant implications for the meat industry. Furthermore, public health concerns such as antibiotic resistance are increasing, and there are pressures to reduce the use of antibiotics in animal agriculture. International trade plays a vital role in the meat sector, and changes in trade policies – tariffs and trade bans can also significantly impact national and global markets.

Globally, the meat industry faces pressure to reduce greenhouse gas emissions due to their significant contribution to climate change. The FAO reports that the livestock sector is responsible for 14.5% of all anthropogenic GHG emissions (7.1 gigatonnes of Co2-equivalent per year),[6] with beef and dairy production being the main contributors. The production and consumption of meat, particularly red meat, require large amounts of resources, including land, water, and energy, resulting in emissions of greenhouse gases that can harm human health and the environment. The livestock industry needs to adopt sustainable practices such as improving feed, manure management and energy efficiency to reduce emissions. The Global Livestock Environmental Assessment Model (GLEAM) estimate the mitigation potential for the sector to be around 33%, or about 2.5 gigatonnes CO2-eq.[7] This figure arises from the assumption that producers in a given system, region and agroecological zone apply the practices of the 10th percentile of producers with the lowest emissions intensities while maintaining constant output. Achieving this will require investment in research, technology, and infrastructure and collaboration between the industry and government stakeholders to implement policies and regulatory frameworks that support a sustainable and climate-resilient livestock sector.

Box 6.3. Implications of Foot and Mouth Disease (FMD) and global meat market segmentation

The *Outlook* projections generally assume integrated global markets, where the "law-of-one-price" applies across national and international markets, subject to border measures which may weaken price linkages. In this respect, it is assumed that there is one integrated international market for a given commodity, and price shocks are transmitted spatially across borders. An important exception has been for the global markets of bovine and pigmeat due, among other things, to the significance of foot and mouth disease (FMD), which continues to be present in 77%[1] of the global livestock population in countries that hold some three quarters of the world's population. Segmentation arises from the application of sanitary barriers by countries free from FMD, given their concern for the disease's highly contagious nature that enables transmission readily via live animals, traded meat, or human movement. In 1927, the United States introduced sanitary legislation banning meat imports from countries where FMD was endemic, leading to the creation of two different beef markets, known as the Pacific and Atlantic markets.[2]

The Pacific area, free of FMD, experienced gradual expansion, while the Atlantic market, endemic to the disease, produced growing surpluses and was unable to access more wealthy FMD free markets, resulting in significant price differentials between the two zones, to the advantage of the Pacific traders. However, with changing technologies, institutional arrangements and market structures, some analysts have

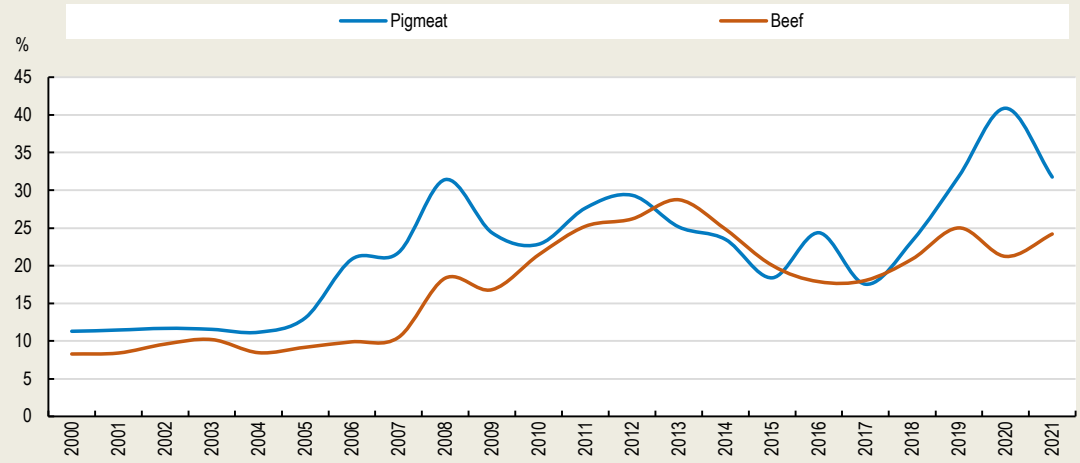
questioned whether the international bovine and pigmeat markets remain effectively segmented in product flow and price transmission.

The nature of FMD market segmentation has changed considerably over time. First, policy changes, such as status assessments and conditions established by the World Organization for Animal Health, have enabled FMD-free zones within FMD endemic countries adopting mitigation risk measures, allowing trade to occur (for more details, see https://www.woah.org/en/disease/foot-and-mouth-disease/#ui-id-2)[3]. For example, such zoning has allowed Brazil, the world's largest exporter of bovine meat and fourth largest pigmeat exporter, establish trade with the Pacific market.[4] Vaccines for FMD have also become more widely used in FMD infected countries, enabling tighter disease control and trade, and vaccination strategies have been widely pursued.

Second, from a market structure perspective, some FMD-free countries of the Pacific zone have been shipping large quantities of bovine and pigmeat into the FMD endemic market of the Atlantic zone (Figure 6.9), reaching at times 30-40% of their total shipments. Their participation in the FMD market has grown over time. Such a surplus situation is anticipated to continue for the foreseeable future, implying a considerably stronger connection between the two zones.

Figure 6.9. Increasing share of meat traded from FMD free zone to FMD markets

Beef and pigmeat, 2000-2021



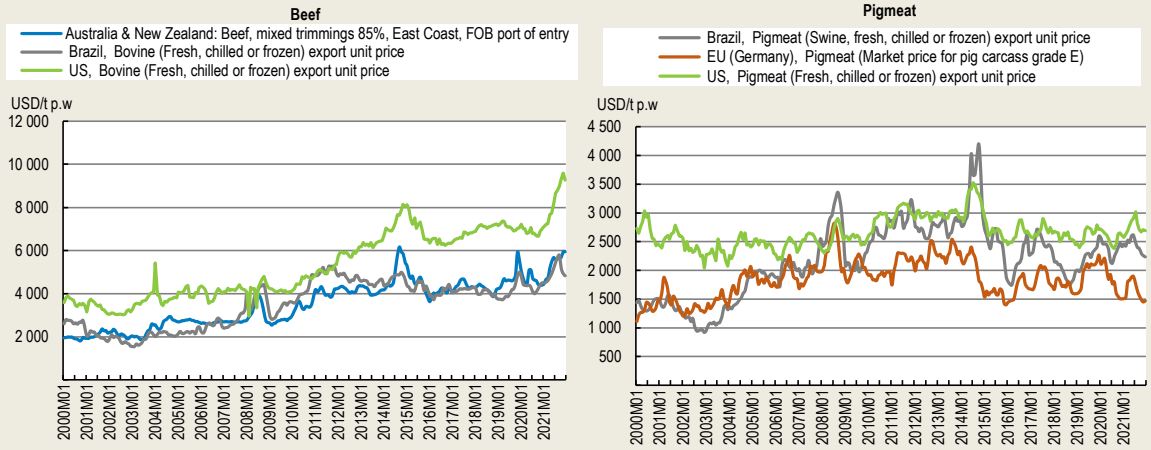
Note: Countries used as a proxy for FMD free region; Australia, Canada, Colombia, Indonesia, Japan, Korea, Mexico, New Zealand, Peru, and The Philippines.
Source: UN COMTRADE database.

StatLink 2 https://stat.link/q4175w

Third, evidence of this connection can be seen in the co-movement of indicative prices of the two zones displayed in Figure 6.10 over the past two decades. Formal statistical tests using monthly data for unit export values of frozen boneless beef for Australia, Brazil, and the United States from 2000 to 2021 do not reject the hypothesis of co-integration between these series, with the Australian price influencing Brazil and US price movements. Similar tests using monthly export unit values for pigmeat for Brazil, Germany and US prices indicate co-integration between the United States and Brazil series only, with detection of causality between the US price influencing the Brazilian price.

Figure 6.10. Selected beef and pigmeat reference prices

2000-2021



Source: OECD/FAO (2023), "OECD-FAO Agricultural Outlook", OECD Agriculture statistics (database), http://dx.doi.org/10.1787/agr-outl-data-en.

StatLink 2 https://stat.link/ztgowy

In previous editions of the *Outlook*, it has been presumed that segmented markets between the Pacific or FMD free zone and the Atlantic or FMD zone exist for bovine and pigmeat. The Aglink-Cosimo model underlying the projections of the *Outlook* has specified such segmentation in the trade between the two regions. Supported by an updated analysis of markets (as described above), the projection of this Outlook presumes a high degree of integration of trade between these zones, such that quantity flows will bind common price movements as is the case for the other commodities. The underlying model assumption is that the law of one price applies across the two zones for both bovine and pigmeat. Should any of the conditions for such integration fail over the outlook period, such as a significant outbreak of FMD in a large FMD-free exporting country, market structures could change quickly and significantly affect the market assessment of this *Outlook*.

Notes

1. https://www.woah.org/en/disease/foot-and-mouth-disease.
2. Blackwell JH (1980), "Symposium: international challenges and perspectives: Internationalism and survival of foot-and-mouth disease virus in cattle and food products", *J Dairy Sci.,* Jun;63(6):1019-30. doi: 10.3168/jds.s0022-0302(80)83040-2. PMID: 7400424.
3. Article 3.3 of the SPS agreement indicates that WTO Members may not follow the WOAH recommendations, leaving the final decision to accept or not the proposed zone on the side of the trading partners of the infected country.
4. "Zone means a clearly defined part of a country containing an animal subpopulation with a distinct health status with respect to a specific disease for which required surveillance, control and biosecurity measures have been applied for the purpose of international trade" OIE - Terrestrial Animal Health Code Twenty-ninth edition, 2021). For more information see Junker, F., J. Ilicic-Komorowska and F. van Tongeren (2009), "Impact of Animal Disease Outbreaks and Alternative Control Practices on Agricultural Markets and Trade: The case of FMD", *OECD Food, Agriculture and Fisheries Papers*, No. 19, OECD Publishing, Paris, https://dx.doi.org/10.1787/221275827814.

Notes

[1] The proportion of feed costs in the cost of producing meat can vary depending on the type of meat and the specific production system. In major meat producing countries with intensive farming systems chicken feed costs can account for 60-70% of the total cost of production, while in pig production, it can account for 50-70% of the total cost. In ruminant animals such as cattle and sheep, feed costs are generally a lower proportion as these animals can graze on pasture and consume a wider range of feed sources. In the case of feedlot operations, it can represent around 25% of the total cost. However, the total cost of cattle production is much higher, as is total feed use per kg of meat produced.

[2] For example, in broiler chicken production, labour costs can account for around 5-10% of the total cost of production, while in pig production, it can be around 10-20%. In the case of ruminant animals, labour costs are generally lower as they require less intensive management, with some exceptions, such as feedlot operations, for which labour cost can represent around 8% (publications.gc.ca/pub?id=9.581110&sl=0).

[3] For more information on how ASF may impact agricultural markets and to compare various outcomes induced by the ASF outbreak in China see Frezal, C., H. Gay and C. Nenert (2021), "The Impact of the African Swine Fever outbreak in China on global agricultural markets", *OECD Food, Agriculture and Fisheries Papers*, No. 156, OECD Publishing, Paris, https://doi.org/10.1787/96d0410d-en.

[4] Currently, a country affected by ASF is not obliged to completely stop its exports if it takes the measures recommended by the WOAH.

[5]Niemi, J.K. (2020), “Impacts of African Swine Fever on Pigmeat Markets in Europe”, *Front. Vet. Sci*., Vol.7:634, doi: 10.3389/fvets.2020.00634.

[6] Gerber, P.J., H. Steinfeld, B. Henderson, A. Mottet, C. Opio, J. Dijkman, A. Falcucci, and G. Tempio (2013), *Tackling climate change through livestock – A global assessment of emissions and mitigation opportunities*, Food and Agriculture Organization of the United Nations (FAO), Rome. (https://www.fao.org/3/i3437e/i3437e.pdf)

[7] Using 2015 as a reference year (https://www.fao.org/gleam/dashboard-old/en/).

ANNEX C

Table C.4. World meat projections

Calendar year

		Average 2020-22est	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
WORLD												
BEEF AND VEAL												
Production	kt cwe	71 211	72 100	72 647	73 265	73 911	74 569	75 228	75 873	76 525	77 166	77 812
Consumption	kt cwe	70 499	71 948	72 468	73 067	73 732	74 390	75 049	75 693	76 344	76 986	77 631
PIGMEAT												
Production	kt cwe	116 806	122 072	123 833	125 088	125 798	126 388	127 070	127 542	128 132	128 750	129 377
Consumption	kt cwe	116 667	122 023	123 765	125 009	125 725	126 313	126 994	127 466	128 056	128 674	129 302
POULTRY MEAT												
Production	kt rtc	136 552	139 681	141 387	142 914	144 976	146 917	148 797	150 686	152 580	154 473	156 247
Consumption	kt rtc	135 413	139 677	141 366	142 892	144 980	146 916	148 793	150 667	152 576	154 462	156 237
SHEEP MEAT												
Production	kt cwe	16 206	16 649	16 890	17 077	17 310	17 540	17 763	17 985	18 206	18 425	18 644
Consumption	kt cwe	16 259	16 726	16 968	17 155	17 388	17 619	17 842	18 064	18 286	18 505	18 724
TOTAL MEAT												
Per capita consumption[1]	kg rwt	28.1	28.5	28.6	28.7	28.7	28.7	28.7	28.7	28.7	28.8	28.8
DEVELOPED COUNTRIES												
BEEF AND VEAL												
Production	kt cwe	31 276	31 312	31 232	31 333	31 462	31 576	31 691	31 796	31 906	32 011	32 120
Consumption	kt cwe	29 847	29 935	29 701	29 757	29 829	29 888	29 941	29 989	30 043	30 094	30 147
PIGMEAT												
Production	kt cwe	47 100	46 046	45 986	46 012	45 970	45 940	45 887	45 851	45 816	45 813	45 806
Consumption	kt cwe	41 011	41 446	41 495	41 597	41 626	41 634	41 621	41 612	41 599	41 591	41 588
POULTRY MEAT												
Production	kt rtc	52 863	53 655	54 244	54 619	54 935	55 265	55 585	55 910	56 234	56 555	56 900
Consumption	kt rtc	49 600	51 089	51 536	51 852	52 154	52 446	52 726	52 990	53 281	53 547	53 845
SHEEP MEAT												
Production	kt cwe	3 383	3 462	3 493	3 491	3 516	3 539	3 559	3 579	3 598	3 617	3 635
Consumption	kt cwe	2 697	2 749	2 748	2 732	2 747	2 761	2 771	2 781	2 791	2 800	2 808
TOTAL MEAT												
Per capita consumption[1]	kg rwt	56.0	56.5	56.6	56.7	56.8	56.8	56.9	56.9	57.0	57.0	57.1
DEVELOPING COUNTRIES												
BEEF AND VEAL												
Production	kt cwe	39 935	40 789	41 414	41 932	42 450	42 993	43 537	44 078	44 620	45 155	45 692
Consumption	kt cwe	40 651	42 013	42 767	43 310	43 902	44 502	45 109	45 704	46 302	46 892	47 484
PIGMEAT												
Production	kt cwe	69 705	76 026	77 847	79 077	79 828	80 448	81 183	81 692	82 316	82 936	83 571
Consumption	kt cwe	75 656	80 578	82 270	83 412	84 099	84 679	85 373	85 854	86 457	87 083	87 714
POULTRY MEAT												
Production	kt rtc	83 689	86 027	87 143	88 295	90 041	91 652	93 212	94 776	96 346	97 918	99 347
Consumption	kt rtc	85 813	88 588	89 830	91 040	92 826	94 470	96 067	97 677	99 295	100 916	102 392
SHEEP MEAT												
Production	kt cwe	12 822	13 187	13 397	13 586	13 794	14 001	14 204	14 406	14 608	14 808	15 009
Consumption	kt cwe	13 561	13 977	14 220	14 422	14 641	14 858	15 071	15 283	15 495	15 705	15 915
TOTAL MEAT												
Per capita consumption[1]	kg rwt	21.8	22.3	22.5	22.5	22.6	22.7	22.7	22.8	22.8	22.9	22.9
OECD[2]												
BEEF AND VEAL												
Production	kt cwe	30 473	30 406	30 292	30 389	30 509	30 610	30 710	30 804	30 902	30 994	31 087
Consumption	kt cwe	29 330	29 454	29 168	29 220	29 281	29 329	29 368	29 406	29 447	29 484	29 523
PIGMEAT												
Production	kt cwe	44 784	43 845	43 772	43 826	43 796	43 768	43 718	43 681	43 647	43 646	43 639
Consumption	kt cwe	40 038	40 773	40 770	40 908	40 950	40 962	40 951	40 940	40 925	40 917	40 912
POULTRY MEAT												
Production	kt rtc	53 510	54 970	55 668	56 129	56 489	56 855	57 207	57 564	57 919	58 270	58 610
Consumption	kt rtc	50 253	52 148	52 650	53 022	53 372	53 718	54 043	54 347	54 678	54 985	55 292
SHEEP MEAT												
Production	kt cwe	2 782	2 947	2 999	3 009	3 045	3 076	3 099	3 117	3 133	3 149	3 164
Consumption	kt cwe	2 135	2 274	2 293	2 289	2 314	2 337	2 350	2 359	2 367	2 373	2 378
TOTAL MEAT												
Per capita consumption[1]	kg rwt	56.7	57.6	57.6	57.7	57.8	57.9	57.9	57.9	57.9	58.0	58.0

Note: Calendar Year; except year ending 30 June for New Zealand in aggregates. Average 2020-22est: Data for 2022 are estimated. Prices are in nominal terms.

1. Per capita consumption expressed in boneless retail weight. Carcass weight to boneless retail weight conversion factors are 0.67 for beef and veal, 0.73 for pig meat, 0.6 for poultry meat and 0.66 for sheep meat.
2. Excludes Iceland and Costa Rica but includes all EU member countries.

Source: OECD/FAO (2023), "OECD-FAO Agricultural Outlook", *OECD Agriculture statistics* (database). dx.doi.org/10.1787/agr-outl-data-en

ANNEX C

Table C.25.1. Meat projections: Production and trade

Calendar year

	PRODUCTION (kt cwe)[4]		Growth (%)[5]		IMPORTS (kt cwe)[6]		Growth (%)[5]		EXPORTS (kt cwe)[6]		Growth (%)[5]	
	Average 2020-22est	2032	2013-22	2023-32	Average 2020-22est	2032	2013-22	2023-32	Average 2020-22est	2032	2013-22	2023-32
WORLD	**340 775**	**382 080**	**1.34**	**0.95**	**38 709**	**41 557**	**3.83**	**0.71**	**40 392**	**41 554**	**3.05**	**0.69**
NORTH AMERICA	52 927	55 780	2.03	0.44	2 979	3 200	2.16	0.14	10 435	10 435	2.46	0.55
Canada	5 240	5 440	1.84	0.40	666	728	-0.82	1.08	2 305	2 239	3.19	0.48
United States	47 687	50 339	2.05	0.44	2 313	2 472	3.18	-0.12	8 130	8 196	2.27	0.57
LATIN AMERICA	55 817	63 302	1.63	1.16	5 309	5 908	3.99	0.50	11 445	12 564	4.51	1.27
Argentina	6 136	6 695	2.23	0.83	51	51	6.34	0.02	1 122	1 352	14.08	1.65
Brazil	28 267	30 555	1.31	0.79	94	84	1.13	-0.02	7 848	8 360	3.06	1.17
Chile	1 597	1 930	1.28	1.87	704	677	9.11	-0.10	474	505	6.66	1.18
Colombia	2 991	3 756	2.66	1.81	246	283	10.05	-0.03	54	71	10.60	3.97
Mexico	7 403	8 347	2.73	1.03	2 349	2 673	4.12	0.69	688	794	11.89	1.60
Paraguay	669	917	4.13	3.52	41	50	5.13	-0.10	407	574	2.47	3.50
Peru	2 152	2 799	3.48	2.38	115	126	12.66	1.66	1	2	-22.17	-0.16
EUROPE	64 378	63 119	1.40	-0.01	4 525	4 564	-3.54	-0.47	9 947	8 712	4.68	-0.08
European Union[1]	44 236	41 979	1.01	-0.28	1 365	1 483	-1.63	-0.80	7 368	6 184	3.97	-0.37
United Kingdom	4 151	4 275	1.72	0.33	1 494	1 727	-1.55	0.67	856	889	1.54	0.62
Russia	10 916	11 388	3.56	0.35	599	264	-14.16	-4.88	677	609	26.70	0.00
Ukraine	2 150	2 256	-0.46	1.52	384	322	3.73	-1.43	480	446	12.65	1.18
AFRICA	17 979	22 570	1.86	2.30	3 341	5 560	2.71	3.95	320	355	0.55	1.78
Egypt	2 093	2 919	0.64	3.26	346	507	-3.39	1.75	3	1	-8.73	-1.02
Ethiopia	795	931	3.12	2.25	1	1	0.11	7.44	15	14	-0.44	1.83
Nigeria	1 205	1 469	0.59	2.13	8	16	15.83	5.69	0	0	..	..
South Africa	3 530	4 272	1.76	1.64	487	478	-0.23	-0.46	154	235	-0.42	4.87
ASIA	143 372	170 404	0.97	1.26	22 013	21 656	6.70	0.38	5 304	6 074	1.63	0.79
China[2]	84 428	96 211	-0.11	0.63	8 733	6 652	21.62	-0.26	850	674	-0.86	-2.08
India	7 353	9 640	1.48	2.36	2	3	7.50	3.72	1 339	1 521	-3.68	0.32
Indonesia	4 581	5 731	7.21	2.08	271	418	17.80	2.06	3	3	-5.37	0.67
Iran	3 060	3 525	0.85	2.07	149	176	5.74	-6.92	61	36	-8.69	5.71
Japan	3 456	3 372	0.80	-0.23	3 056	3 023	2.15	-0.25	19	19	6.74	0.10
Kazakhstan	1 034	1 290	3.96	2.02	335	373	3.06	1.12	33	35	22.41	-0.50
Korea	2 738	2 793	2.19	0.30	1 444	1 621	5.79	0.17	70	53	10.03	-2.93
Malaysia	1 956	2 532	0.34	2.66	395	537	3.98	0.54	237	288	5.65	2.09
Pakistan	4 945	6 855	6.56	2.82	2	3	-12.63	0.60	79	64	3.89	-0.14
Philippines	2 873	4 201	-1.68	4.50	840	932	11.66	-0.21	8	9	-7.17	-0.34
Saudi Arabia	958	1 358	6.88	2.90	819	707	-4.64	-0.43	64	80	-0.66	0.82
Thailand	3 001	3 706	0.04	2.76	36	40	-3.71	-0.46	1 339	1 640	6.33	1.90
Türkiye	4 331	5 789	5.32	1.84	82	93	-4.48	0.29	818	1 289	6.72	2.43
Viet Nam	5 724	7 234	3.20	1.86	664	748	-4.75	2.47	24	21	0.90	0.44
OCEANIA	6 301	6 905	-0.33	0.72	542	669	1.89	1.67	2 941	3 415	-1.30	0.76
Australia	4 692	5 260	-0.78	0.83	334	408	1.02	1.88	1 834	2 321	-2.49	1.00
New Zealand	1 473	1 491	1.14	0.30	84	97	3.49	0.90	1 104	1 091	0.99	0.28
DEVELOPED COUNTRIES	**134 623**	**138 461**	**1.58**	**0.32**	**12 405**	**13 000**	**-0.24**	**-0.02**	**23 561**	**22 889**	**2.76**	**0.37**
DEVELOPING COUNTRIES	**206 152**	**243 619**	**1.18**	**1.33**	**26 305**	**28 557**	**6.38**	**1.06**	**16 831**	**18 665**	**3.46**	**1.09**
LEAST DEVELOPED COUNTRIES (LDC)	11 601	15 033	2.79	2.48	1 537	3 056	4.48	5.17	63	41	9.48	-1.97
OECD[3]	**131 549**	**136 500**	**1.64**	**0.35**	**14 455**	**15 685**	**2.22**	**0.19**	**23 745**	**23 674**	**2.73**	**0.47**
BRICS	**134 493**	**152 066**	**0.58**	**0.77**	**9 915**	**7 481**	**11.14**	**-0.48**	**10 868**	**11 398**	**2.22**	**0.83**

.. Not available

Note: Calendar year; except year ending 30 June for New Zealand. Average 2020-22est: Data for 2022 are estimated.

1. Refers to all current European Union member States.
2. Refers to mainland only. The economies of Chinese Taipei, Hong Kong (China) and Macau (China) are included in the Asia aggregate.
3. Excludes Iceland and Costa Rica but includes all EU member countries.
4. Gross indigenous production.
5. Least-squares growth rate (see glossary).
6. Excludes trade of live animals.

Source: OECD/FAO (2023), "OECD-FAO Agricultural Outlook", *OECD Agriculture statistics* (database). dx.doi.org/10.1787/agr-outl-data-en

Table C.25.2. Meat projections: Consumption, food

Calendar year

	CONSUMPTION (kt cwe)		Growth (%)[4]		FOOD (kg rwe/cap)[5]		Growth (%)[4]	
	Average 2020-22est	2032	2013-22	2023-32	Average 2020-22est	2032	2013-22	2023-32
WORLD	**338 837**	**381 894**	**1.40**	**0.95**	**28.1**	**28.8**	**0.17**	**0.08**
NORTH AMERICA	45 711	48 734	1.94	0.39	78.6	79.1	1.21	-0.14
Canada	3 272	3 619	1.21	0.56	54.9	55.6	0.01	-0.26
United States	42 439	45 114	2.00	0.38	81.3	81.9	1.32	-0.12
LATIN AMERICA	49 245	56 186	1.24	1.07	49.0	51.9	0.38	0.39
Argentina	5 065	5 394	0.63	0.63	71.2	71.2	-0.18	0.04
Brazil	20 406	22 159	0.72	0.65	65.0	67.2	0.08	0.20
Chile	1 807	2 082	2.44	1.37	61.3	69.0	1.32	1.15
Colombia	3 104	3 891	2.85	1.67	38.3	45.5	1.63	1.16
Mexico	8 887	10 025	2.71	0.88	44.1	46.3	1.77	0.22
Paraguay	299	388	6.63	3.04	27.1	31.4	5.54	2.00
Peru	2 266	2 922	3.88	2.35	41.2	48.4	2.35	1.47
EUROPE	58 682	58 752	0.45	-0.02	52.1	52.7	0.27	0.12
European Union[1]	37 937	37 032	0.39	-0.28	57.0	55.9	0.19	-0.15
United Kingdom	4 789	5 113	0.62	0.40	46.0	47.4	-0.17	0.09
Russia	10 848	11 058	0.80	0.20	48.9	51.5	0.75	0.49
Ukraine	2 053	2 136	-1.76	1.08	30.7	34.3	-1.26	1.78
AFRICA	21 019	27 860	2.05	2.63	9.6	9.9	-0.55	0.34
Egypt	2 478	3 475	-0.07	2.97	14.3	16.8	-2.23	1.33
Ethiopia	756	893	3.49	2.31	3.7	3.4	0.54	0.07
Nigeria	1 273	1 560	0.65	2.13	3.5	3.3	-2.20	-0.28
South Africa	3 786	4 440	1.24	1.28	39.6	41.5	-0.13	0.29
ASIA	160 547	186 371	1.58	1.16	22.3	24.3	0.43	0.54
China[2]	92 361	102 113	0.92	0.59	43.0	48.3	0.27	0.70
India	6 003	8 109	2.99	2.80	1.9	2.3	0.62	1.91
Indonesia	4 985	6 309	7.61	2.05	10.5	12.0	6.40	1.20
Iran	3 133	3 653	1.36	1.38	22.3	23.5	-0.02	0.51
Japan	6 484	6 379	1.40	-0.24	34.3	35.9	1.71	0.32
Kazakhstan	1 340	1 630	3.49	1.86	45.6	50.1	2.00	0.96
Korea	4 113	4 361	3.17	0.27	53.2	57.2	2.76	0.40
Malaysia	2 133	2 801	0.44	2.25	40.3	47.2	-0.86	1.21
Pakistan	4 858	6 785	6.58	2.85	13.4	15.6	4.51	1.17
Philippines	3 713	5 132	0.53	3.45	21.8	26.5	-1.20	2.33
Saudi Arabia	1 874	2 167	0.48	1.61	32.2	32.8	-1.42	0.50
Thailand	1 463	1 824	-4.72	3.05	13.9	17.2	-4.92	3.11
Türkiye	3 608	4 603	4.46	1.64	26.2	31.5	3.23	1.09
Viet Nam	6 381	7 979	2.02	1.92	44.4	51.8	0.91	1.29
OCEANIA	3 635	3 991	1.24	0.88	55.0	53.3	-0.39	-0.24
Australia	2 961	3 212	1.27	0.85	73.8	72.3	-0.20	-0.07
New Zealand	417	464	0.70	0.71	52.3	53.3	-1.15	0.00
DEVELOPED COUNTRIES	**123 156**	**128 388**	**1.17**	**0.28**	**56.0**	**57.1**	**0.71**	**0.11**
DEVELOPING COUNTRIES	**215 682**	**253 506**	**1.53**	**1.31**	**21.8**	**22.9**	**0.10**	**0.28**
LEAST DEVELOPED COUNTRIES (LDC)	13 073	18 102	3.12	2.91	9.2	10.1	0.75	0.75
OECD[3]	**121 755**	**128 105**	**1.52**	**0.31**	**56.7**	**58.0**	**0.94**	**0.08**
BRICS	**133 404**	**147 879**	**0.98**	**0.70**	**27.0**	**28.8**	**0.06**	**0.31**

Note: Calendar year; except year ending 30 June for New Zealand. Average 2020-22est: Data for 2022 are estimated.

1. Refers to all current European Union member States.
2. Refers to mainland only. The economies of Chinese Taipei, Hong Kong (China) and Macau (China) are included in the Asia aggregate.
3. Excludes Iceland and Costa Rica but includes all EU member countries.
4. Least-squares growth rate (see glossary).
5. Per capita consumption expressed in boneless retail weight. Carcass weight to boneless retail weight conversion factors are 0.67 for beef and veal, 0.73 for pig meat, 0.6 for poultry meat and 0.66 for sheep meat.

Source: OECD/FAO (2023), "OECD-FAO Agricultural Outlook", *OECD Agriculture statistics* (database). dx.doi.org/10.1787/agr-outl-data-en

ANNEX C

Table C.26.1. Beef and veal projections: Production and trade

Calendar year

	PRODUCTION (kt cwe)[4]		Growth (%)[5]		IMPORTS (kt cwe)[6]		Growth (%)[5]		EXPORTS (kt cwe)[6]		Growth (%)[5]	
	Average 2020-22est	2032	2013-22	2023-32	Average 2020-22est	2032	2013-22	2023-32	Average 2020-22est	2032	2013-22	2023-32
WORLD	**71 211**	**77 812**	**0.97**	**0.86**	**11 293**	**13 448**	**3.74**	**1.27**	**11 798**	**13 563**	**2.66**	**1.26**
NORTH AMERICA	13 833	14 195	1.91	0.33	1 726	1 674	1.85	-0.42	2 039	2 178	4.57	1.07
Canada	1 560	1 592	1.99	0.23	204	219	-3.41	1.00	589	640	7.34	0.88
United States	12 274	12 603	1.91	0.34	1 521	1 455	2.79	-0.62	1 450	1 539	3.61	1.15
LATIN AMERICA	17 881	19 552	0.17	0.90	874	916	1.05	0.27	4 965	5 961	7.03	1.68
Argentina	3 074	3 233	1.75	0.63	7	7	0.00	-0.15	868	1 055	23.60	1.55
Brazil	8 415	8 935	-1.32	0.49	65	62	-0.89	0.00	2 507	2 993	4.46	1.72
Chile	231	274	0.04	1.81	391	420	7.77	0.79	24	24	19.69	-0.79
Colombia	825	842	-0.91	0.91	9	13	11.77	2.80	54	71	14.74	3.98
Mexico	2 103	2 174	2.01	0.72	124	112	-1.07	-0.38	374	457	11.30	2.42
Paraguay	554	767	3.52	3.62	7	7	14.09	-3.46	394	565	2.16	3.59
Peru	188	208	-0.37	0.82	10	8	6.98	-1.47	0	0	..	..
EUROPE	10 718	10 268	0.41	-0.33	1 115	972	-3.83	0.16	1 085	1 068	3.16	1.22
European Union[1]	7 104	6 708	0.58	-0.43	315	377	-0.52	0.06	574	647	2.74	1.88
United Kingdom	909	880	0.66	-0.31	310	335	-0.55	0.74	144	141	1.68	-0.87
Russia	1 663	1 672	0.33	-0.01	323	95	-10.24	-0.72	89	0	40.00	0.00
Ukraine	322	253	-3.43	-1.56	9	8	11.68	-1.06	29	16	-0.62	1.07
AFRICA	6 278	7 646	0.61	2.16	498	947	-1.98	4.24	88	162	-5.05	7.28
Egypt	538	699	-4.98	2.75	328	489	3.31	1.69	1	0	8.60	-0.08
Ethiopia	447	473	1.59	1.26	0	0	..	72.17	0	0	44.62	..
Nigeria	277	334	-1.82	1.84	2	2	-0.01	0.73	0	0	..	..
South Africa	1 125	1 350	1.71	1.62	5	6	-21.62	2.55	60	137	2.25	9.56
ASIA	19 536	22 963	2.08	1.36	7 043	8 902	7.24	1.58	1 654	1 850	-2.39	0.31
China[2]	6 925	7 772	1.74	0.92	2 953	3 916	32.11	1.73	16	18	-8.43	0.08
India	2 443	2 822	-0.41	0.61	0	0	..	..	1 325	1 507	-3.60	0.33
Indonesia	301	290	-5.00	1.65	265	408	19.04	2.08	0	0	-3.53	-0.14
Iran	550	673	3.85	1.63	54	85	-6.80	1.77	7	6	9.24	-0.61
Japan	476	446	-0.51	-0.24	815	777	1.51	-0.42	9	10	31.29	0.00
Kazakhstan	535	646	4.30	1.46	64	66	0.83	0.16	12	16	25.43	-0.07
Korea	306	337	-1.00	0.23	593	639	7.49	0.32	5	5	-1.82	0.00
Malaysia	29	39	-0.43	2.02	213	276	1.14	1.49	13	13	0.51	-1.47
Pakistan	2 379	3 183	4.91	2.73	1	1	-1.24	-0.02	67	60	6.38	0.01
Philippines	193	200	-6.56	0.35	180	264	5.57	2.88	4	4	3.36	-1.02
Saudi Arabia	40	49	-0.63	1.35	182	216	1.83	1.11	11	11	-6.80	-1.10
Thailand	171	193	-1.89	1.08	32	35	0.83	-0.61	49	56	0.67	0.61
Türkiye	1 431	1 736	8.92	1.46	5	4	-10.40	-0.12	33	58	8.54	6.35
Viet Nam	471	559	4.86	1.44	245	479	-15.01	5.18	1	1	28.30	-0.43
OCEANIA	2 965	3 188	-1.99	0.73	37	37	0.04	0.24	1 967	2 343	-1.99	0.90
Australia	2 200	2 429	-3.18	0.83	19	18	6.36	0.00	1 299	1 690	-3.82	1.03
New Zealand	756	752	2.34	0.43	9	9	-4.11	-0.06	666	652	2.65	0.58
DEVELOPED COUNTRIES	**31 276**	**32 120**	**0.99**	**0.32**	**3 995**	**3 864**	**-0.05**	**-0.09**	**5 174**	**5 756**	**1.42**	**1.16**
DEVELOPING COUNTRIES	**39 935**	**45 692**	**0.96**	**1.26**	**7 298**	**9 584**	**6.36**	**1.87**	**6 623**	**7 807**	**3.72**	**1.34**
LEAST DEVELOPED COUNTRIES (LDC)	3 868	4 696	1.83	2.16	94	346	-3.30	8.87	13	14	-0.49	2.10
OECD[3]	**30 473**	**31 087**	**1.18**	**0.29**	**4 538**	**4 679**	**2.48**	**0.06**	**5 225**	**5 936**	**1.84**	**1.19**
BRICS	**20 570**	**22 551**	**0.03**	**0.68**	**3 345**	**4 079**	**15.43**	**1.64**	**3 996**	**4 656**	**1.26**	**1.40**

.. Not available

Note: Calendar year; except year ending 30 June for New Zealand. Average 2020-22est: Data for 2022 are estimated.

1. Refers to all current European Union member States.
2. Refers to mainland only. The economies of Chinese Taipei, Hong Kong (China) and Macau (China) are included in the Asia aggregate.
3. Excludes Iceland and Costa Rica but includes all EU member countries.
4. Gross indigenous production.
5. Least-squares growth rate (see glossary).
6. Excludes trade of live animals.

Source: OECD/FAO (2023), "OECD-FAO Agricultural Outlook", *OECD Agriculture statistics* (database). dx.doi.org/10.1787/agr-outl-data-en

Table C.26.2. Beef and veal projections: Consumption, food

Calendar year

	CONSUMPTION (kt cwe)		Growth (%)[4]		FOOD (kg rwe/cap)[5]		Growth (%)[4]	
	Average 2020-22est	2032	2013-22	2023-32	Average 2020-22est	2032	2013-22	2023-32
WORLD	**70 499**	**77 631**	**1.08**	**0.86**	**5.9**	**5.9**	**-0.05**	**0.02**
NORTH AMERICA	13 728	13 900	1.51	0.12	24.3	23.2	0.81	-0.41
Canada	995	1 019	0.41	0.22	17.2	16.1	-0.68	-0.57
United States	12 732	12 881	1.60	0.12	25.1	24.0	0.95	-0.38
LATIN AMERICA	13 338	14 037	-1.78	0.55	13.4	13.1	-2.64	-0.13
Argentina	2 214	2 185	-1.95	0.21	32.1	29.8	-2.73	-0.37
Brazil	5 865	5 885	-3.14	-0.08	18.0	17.1	-3.84	-0.57
Chile	579	650	3.93	1.30	20.0	22.0	2.79	1.08
Colombia	701	708	-2.30	0.78	9.0	8.7	-3.50	0.28
Mexico	1 660	1 618	0.96	0.11	8.5	7.7	0.06	-0.55
Paraguay	162	204	7.41	3.47	14.7	16.6	6.18	2.42
Peru	198	216	-0.08	0.72	3.9	3.9	-1.51	-0.12
EUROPE	10 554	10 031	-0.50	-0.39	9.3	9.0	-0.63	-0.24
European Union[1]	6 637	6 281	0.25	-0.56	9.9	9.4	0.12	-0.42
United Kingdom	1 076	1 074	0.17	0.08	10.5	10.2	-0.59	-0.21
Russia	1 914	1 784	-3.01	-0.05	8.7	8.4	-3.08	0.24
Ukraine	297	242	-3.56	-1.71	4.5	4.0	-3.05	-1.02
AFRICA	6 748	8 553	0.48	2.30	3.2	3.2	-2.03	0.04
Egypt	906	1 239	-2.38	2.20	5.6	6.4	-4.32	0.60
Ethiopia	423	447	1.96	1.31	2.1	1.7	-0.97	-0.91
Nigeria	329	402	-1.70	1.95	0.9	0.8	-4.47	-0.45
South Africa	993	1 145	0.10	1.10	11.0	11.3	-1.25	0.11
ASIA	25 350	30 392	3.75	1.45	3.5	4.0	2.75	0.88
China[2]	9 979	11 694	6.16	1.12	4.5	5.4	5.70	1.24
India	1 118	1 315	5.11	0.94	0.4	0.4	2.73	0.14
Indonesia	715	872	2.27	1.69	1.6	1.8	1.36	0.85
Iran	598	753	2.58	1.66	4.6	5.2	1.20	0.79
Japan	1 273	1 218	0.72	-0.36	6.8	6.9	1.06	0.21
Kazakhstan	590	698	3.64	1.36	20.6	22.1	2.28	0.50
Korea	893	971	3.59	0.29	11.4	12.6	3.24	0.44
Malaysia	246	320	0.60	1.60	5.0	5.8	-0.72	0.60
Pakistan	2 303	3 116	4.86	2.79	6.6	7.5	2.90	1.12
Philippines	377	468	-1.51	1.71	2.2	2.4	-2.94	0.55
Saudi Arabia	212	254	2.00	1.26	4.0	4.2	0.05	0.17
Thailand	116	135	-3.37	0.78	1.1	1.3	-3.70	0.78
Türkiye	1 415	1 692	8.12	1.32	10.8	12.2	6.68	0.77
Viet Nam	730	1 054	-6.60	2.95	5.0	6.7	-7.50	2.34
OCEANIA	781	718	-1.15	0.31	12.1	9.9	-2.70	-0.78
Australia	694	632	-0.70	0.35	17.8	14.6	-2.10	-0.55
New Zealand	72	71	-4.15	0.04	9.3	8.4	-5.85	-0.65
DEVELOPED COUNTRIES	**29 847**	**30 147**	**0.74**	**0.13**	**13.7**	**13.6**	**0.34**	**-0.02**
DEVELOPING COUNTRIES	**40 651**	**47 484**	**1.34**	**1.35**	**4.1**	**4.3**	**0.03**	**0.36**
LEAST DEVELOPED COUNTRIES (LDC)	3 980	5 096	1.96	2.51	2.9	2.9	-0.37	0.37
OECD[3]	**29 330**	**29 523**	**1.28**	**0.09**	**13.9**	**13.6**	**0.77**	**-0.12**
BRICS	**19 869**	**21 823**	**1.36**	**0.67**	**3.9**	**4.2**	**0.52**	**0.31**

Note: Calendar year; except year ending 30 June for New Zealand. Average 2020-22est: Data for 2022 are estimated.

1. Refers to all current European Union member States.
2. Refers to mainland only. The economies of Chinese Taipei, Hong Kong (China) and Macau (China) are included in the Asia aggregate.
3. Excludes Iceland and Costa Rica but includes all EU member countries.
4. Least-squares growth rate (see glossary).
5. Per capita consumption expressed in boneless retail weight. Carcass weight to boneless retail weight conversion factors is 0.67 for beef and veal.

Source: OECD/FAO (2023), "OECD-FAO Agricultural Outlook", *OECD Agriculture statistics* (database). dx.doi.org/10.1787/agr-outl-data-en

ANNEX C

Table C.27.1. Pigmeat projections: Production and trade

Calendar year

	PRODUCTION (kt cwe)[4]		Growth (%)[5]		IMPORTS (kt cwe)[6]		Growth (%)[5]		EXPORTS (kt cwe)[6]		Growth (%)[5]	
	Average 2020-22est	2032	2013-22	2023-32	Average 2020-22est	2032	2013-22	2023-32	Average 2020-22est	2032	2013-22	2023-32
WORLD	**116 806**	**129 377**	**-0.14**	**0.59**	**11 748**	**10 399**	**5.94**	**0.03**	**11 754**	**10 210**	**4.68**	**-0.11**
NORTH AMERICA	14 590	15 077	2.21	0.49	807	1 035	2.76	1.17	4 705	4 600	3.94	0.71
Canada	2 193	2 135	1.48	0.00	261	280	2.41	1.06	1 584	1 447	2.95	0.19
United States	12 396	12 942	2.35	0.57	546	755	2.76	1.21	3 121	3 154	4.46	0.96
LATIN AMERICA	9 102	10 338	3.12	1.24	1 969	2 233	7.97	0.43	1 653	1 391	8.68	0.04
Argentina	692	788	6.45	0.97	35	30	14.34	0.01	27	9	15.32	-0.01
Brazil	4 679	4 903	4.08	0.83	22	15	10.20	-0.08	1 036	784	8.60	-0.43
Chile	585	689	1.34	1.53	141	81	15.27	-0.99	256	245	6.22	1.00
Colombia	465	620	8.02	2.11	137	182	12.00	0.81	0	0	..	..
Mexico	1 488	1 754	2.07	1.02	1 154	1 384	6.67	0.67	306	328	12.80	0.59
Paraguay	65	85	9.56	2.46	5	6	7.92	1.26	5	3	8.31	-1.27
Peru	176	231	3.94	2.12	12	19	6.03	2.00	0	0	..	..
EUROPE	30 245	28 375	1.15	-0.37	1 144	1 340	-5.77	0.39	5 074	3 799	5.13	-1.25
European Union[1]	23 122	21 008	0.60	-0.62	127	154	-2.21	0.69	4 547	3 281	5.19	-1.38
United Kingdom	961	981	2.20	0.42	679	736	-0.96	-0.06	253	253	2.42	-0.20
Russia	4 328	4 507	5.47	0.21	44	49	-30.39	0.04	193	200	26.75	0.00
Ukraine	675	701	-1.45	2.01	58	66	7.24	-2.65	5	1	-15.83	0.53
AFRICA	1 601	1 997	3.08	2.08	275	514	0.39	6.29	31	31	1.31	0.12
Egypt	1	1	6.10	-1.40	2	4	31.77	6.11	0	0	..	..
Ethiopia	2	3	1.86	2.58	0	1	..	..	0	0	..	..
Nigeria	291	342	1.70	1.94	6	14	33.51	6.89	0	0	..	..
South Africa	317	398	4.80	1.61	30	34	-0.41	-0.52	26	26	1.21	0.52
ASIA	60 685	72 956	-1.71	0.87	7 155	4 789	10.45	-1.09	259	357	-5.09	2.10
China[2]	48 578	58 009	-2.20	0.55	3 938	1 537	21.14	-2.82	128	165	-9.23	0.48
India	331	363	-0.95	1.05	1	2	6.65	2.32	2	1	36.32	-10.01
Indonesia	326	410	-0.69	1.76	4	6	1.09	0.73	0	0	..	..
Iran	0	0	..	..	0	0	63.98	..	0	0	29.83	..
Japan	1 309	1 245	0.25	-0.53	1 306	1 268	2.13	-0.31	3	4	14.64	0.51
Kazakhstan	85	95	-2.15	1.33	46	60	2.02	1.92	1	1	3.98	-0.27
Korea	1 407	1 372	1.93	0.03	621	727	4.19	0.08	8	3	12.52	-10.97
Malaysia	218	236	0.17	0.81	28	65	5.73	3.94	3	2	-8.40	-4.31
Pakistan	0	0	..	..	0	0	..	..	0	0	..	..
Philippines	1 276	2 057	-4.23	6.56	274	157	12.27	-8.12	2	3	-1.48	0.72
Saudi Arabia	0	0	..	..	18	18	10.60	0.00	2	2	-0.72	0.00
Thailand	975	1 275	-1.62	5.13	1	1	-19.03	1.78	43	100	3.87	13.33
Türkiye	0	0	..	..	26	32	9.67	0.00	26	32	9.67	0.00
Viet Nam	3 718	4 732	1.35	1.79	208	38	70.12	-9.76	11	12	-7.76	1.03
OCEANIA	582	635	2.13	0.65	397	489	1.52	1.81	32	31	1.19	-0.01
Australia	438	481	2.65	0.66	315	390	0.76	1.98	30	30	0.68	0.00
New Zealand	45	43	-0.49	-0.49	71	84	5.23	1.05	1	1	20.28	0.00
DEVELOPED COUNTRIES	**47 100**	**45 806**	**1.46**	**-0.06**	**3 767**	**4 278**	**-0.92**	**0.53**	**9 846**	**8 469**	**4.52**	**-0.22**
DEVELOPING COUNTRIES	**69 705**	**83 571**	**-1.13**	**0.96**	**7 981**	**6 121**	**11.55**	**-0.31**	**1 907**	**1 741**	**5.53**	**0.42**
LEAST DEVELOPED COUNTRIES (LDC)	2 280	3 163	4.51	2.81	145	310	-0.69	7.30	1	1	2.76	-0.60
OECD[3]	**44 784**	**43 639**	**1.29**	**-0.06**	**5 411**	**6 105**	**3.15**	**0.44**	**10 143**	**8 785**	**4.71**	**-0.16**
BRICS	**58 233**	**68 181**	**-1.31**	**0.56**	**4 036**	**1 636**	**11.82**	**-2.67**	**1 385**	**1 176**	**6.14**	**-0.24**

.. Not available

Note: Calendar year; except year ending 30 June for New Zealand. Average 2020-22est: Data for 2022 are estimated.

1. Refers to all current European Union member States.
2. Refers to mainland only. The economies of Chinese Taipei, Hong Kong (China) and Macau (China) are included in the Asia aggregate.
3. Excludes Iceland and Costa Rica but includes all EU member countries.
4. Gross indigenous production.
5. Least-squares growth rate (see glossary).
6. Excludes trade of live animals.

Source: OECD/FAO (2023), "OECD-FAO Agricultural Outlook", *OECD Agriculture statistics* (database). dx.doi.org/10.1787/agr-outl-data-en

Table C.27.2. Pigmeat projections: Consumption, food

Calendar year

	CONSUMPTION (kt cwe)		Growth (%)[4]		FOOD (kg rwe/cap)[5]		Growth (%)[4]	
	Average 2020-22est	2032	2013-22	2023-32	Average 2020-22est	2032	2013-22	2023-32
WORLD	**116 667**	**129 302**	**-0.07**	**0.58**	**10.8**	**10.9**	**-1.12**	**-0.24**
NORTH AMERICA	10 704	11 503	1.55	0.46	20.6	20.9	0.85	-0.06
Canada	719	813	-0.40	-0.02	13.5	14.0	-1.49	-0.81
United States	9 985	10 690	1.71	0.49	21.4	21.8	1.05	0.00
LATIN AMERICA	9 433	11 189	3.19	1.23	11.8	12.9	2.29	0.55
Argentina	700	809	6.44	0.95	11.1	12.0	5.59	0.37
Brazil	3 665	4 134	3.10	1.10	16.8	18.0	2.35	0.63
Chile	470	525	1.68	1.34	17.7	19.4	0.56	1.12
Colombia	601	802	8.88	1.80	8.4	10.7	7.55	1.30
Mexico	2 351	2 820	3.05	0.89	13.1	14.7	2.13	0.25
Paraguay	65	88	9.47	2.53	6.5	7.8	8.21	1.50
Peru	188	250	4.09	2.11	4.0	4.9	2.60	1.26
EUROPE	26 299	25 896	0.13	-0.20	25.4	25.3	0.01	-0.03
European Union[1]	18 666	17 832	-0.30	-0.47	30.2	29.1	-0.42	-0.32
United Kingdom	1 387	1 464	0.50	0.28	14.8	15.1	-0.26	0.00
Russia	4 176	4 356	2.27	0.21	20.7	22.3	2.19	0.51
Ukraine	733	772	-1.61	1.49	12.2	13.8	-1.09	2.21
AFRICA	1 843	2 475	2.63	2.86	1.0	1.0	0.06	0.59
Egypt	3	4	23.31	4.42	0.0	0.0	20.86	2.79
Ethiopia	2	3	0.70	4.79	0.0	0.0	-2.19	2.49
Nigeria	298	357	1.96	2.09	0.9	0.8	-0.91	-0.32
South Africa	322	406	4.50	1.49	3.9	4.4	3.08	0.50
ASIA	67 440	77 146	-0.87	0.71	10.3	11.1	-1.78	0.15
China[2]	52 321	59 282	-1.38	0.45	26.0	29.8	-1.81	0.58
India	330	363	-1.02	1.10	0.1	0.1	-3.27	0.30
Indonesia	316	404	-0.53	1.84	0.8	0.9	-1.40	1.01
Iran	0	0	..	..	0.0	0.0	33.31	-0.86
Japan	2 606	2 510	1.07	-0.42	15.1	15.5	1.42	0.15
Kazakhstan	130	154	-0.81	1.56	5.0	5.3	-2.12	0.70
Korea	2 021	2 096	2.51	0.02	28.1	29.6	2.16	0.18
Malaysia	242	299	0.95	1.46	5.4	5.9	-0.38	0.45
Pakistan	0	0	..	..	0.0	0.0	23.98	-1.63
Philippines	1 547	2 211	-2.20	4.41	10.0	12.6	-3.62	3.23
Saudi Arabia	16	16	13.64	0.00	0.3	0.3	11.47	-1.08
Thailand	751	934	-3.39	3.98	7.7	9.6	-3.73	3.98
Türkiye	0	0	..	..	0.0	0.0	-1.36	-0.55
Viet Nam	3 917	4 760	2.11	1.61	28.9	32.9	1.13	1.01
OCEANIA	948	1 092	1.89	1.18	16.0	16.3	0.29	0.08
Australia	723	841	1.87	1.28	20.2	21.2	0.43	0.37
New Zealand	115	126	2.62	0.51	16.2	16.3	0.80	-0.18
DEVELOPED COUNTRIES	**41 011**	**41 588**	**0.59**	**0.03**	**20.6**	**20.5**	**0.19**	**-0.12**
DEVELOPING COUNTRIES	**75 656**	**87 714**	**-0.42**	**0.86**	**8.6**	**8.9**	**-1.62**	**-0.11**
LEAST DEVELOPED COUNTRIES (LDC)	2 432	3 480	4.08	3.14	1.9	2.2	1.69	0.98
OECD[3]	**40 038**	**40 912**	**0.79**	**0.03**	**20.6**	**20.5**	**0.27**	**-0.17**
BRICS	**60 814**	**68 540**	**-0.89**	**0.48**	**13.6**	**14.8**	**-1.53**	**0.16**

.. Not available

Note: Calendar year; except year ending 30 June for New Zealand. Average 2020-22est: Data for 2022 are estimated.

1. Refers to all current European Union member States.
2. Refers to mainland only. The economies of Chinese Taipei, Hong Kong (China) and Macau (China) are included in the Asia aggregate.
3. Excludes Iceland and Costa Rica but includes all EU member countries.
4. Least-squares growth rate (see glossary).
5. Per capita consumption expressed in boneless retail weight. Carcass weight to boneless retail weight conversion factors is 0.73 for pig meat.

Source: OECD/FAO (2023), "OECD-FAO Agricultural Outlook", *OECD Agriculture statistics* (database). dx.doi.org/10.1787/agr-outl-data-en

ANNEX C

Table C.28.1. Poultry meat projections: Production and trade

Calendar year

	PRODUCTION (kt rtc)		Growth (%)[4]		IMPORTS (kt rtc)		Growth (%)[4]		EXPORTS (kt rtc)		Growth (%)[4]	
	Average 2020-22est	2032	2013-22	2023-32	Average 2020-22est	2032	2013-22	2023-32	Average 2020-22est	2032	2013-22	2023-32
WORLD	**136 552**	**156 247**	**2.89**	**1.27**	**14 577**	**16 544**	**2.81**	**0.74**	**15 728**	**16 544**	**2.51**	**0.74**
NORTH AMERICA	24 419	26 413	2.01	0.46	271	327	-0.19	0.38	3 689	3 655	-0.07	0.06
Canada	1 471	1 696	2.23	1.08	178	205	-1.89	1.30	132	152	-5.92	1.59
United States	22 948	24 717	1.99	0.42	92	123	3.68	-1.00	3 558	3 502	0.20	0.00
LATIN AMERICA	28 368	32 907	2.19	1.31	2 454	2 748	2.67	0.64	4 796	5 179	1.37	1.17
Argentina	2 316	2 620	1.89	1.06	9	14	-4.71	0.12	223	284	-0.74	2.13
Brazil	15 031	16 566	2.24	0.94	5	4	379.72	0.00	4 305	4 583	1.38	1.12
Chile	766	953	1.69	2.19	172	176	8.26	-1.60	188	230	6.27	1.63
Colombia	1 701	2 290	3.48	2.08	100	89	7.31	-1.87	0	0	-40.82	..
Mexico	3 705	4 309	3.48	1.21	1 069	1 176	2.64	0.82	5	6	4.76	-0.08
Paraguay	47	61	6.37	3.91	29	37	3.22	0.40	7	6	197.71	-0.40
Peru	1 749	2 321	4.05	2.61	93	98	14.65	1.91	1	2	-22.06	-0.16
EUROPE	22 158	23 189	2.35	0.59	2 052	2 053	-1.68	-1.22	3 644	3 682	4.83	0.79
European Union[1]	13 380	13 620	2.02	0.33	783	829	-1.81	-1.28	2 198	2 191	2.09	0.58
United Kingdom	1 993	2 114	2.40	0.56	440	594	-1.90	1.69	374	409	2.38	1.66
Russia	4 709	5 000	3.37	0.63	232	120	-8.88	-8.30	393	408	24.58	0.00
Ukraine	1 145	1 302	1.31	1.97	316	244	4.84	-1.17	446	428	15.14	1.19
AFRICA	6 713	8 655	2.82	2.46	2 558	4 087	5.09	3.63	165	129	4.60	-1.84
Egypt	1 492	2 135	4.41	3.45	16	12	-24.19	1.95	2	1	-12.86	-1.06
Ethiopia	66	77	-0.59	1.83	1	1	..	1.07	0	0	..	..
Nigeria	237	279	2.41	1.73	0	0	..	..	0	0	..	..
South Africa	1 915	2 342	1.59	1.74	451	436	0.91	-0.48	66	66	-3.16	0.34
ASIA	53 281	63 204	3.99	1.72	7 158	7 213	3.78	-0.02	3 366	3 835	5.23	0.91
China[2]	23 829	24 909	4.09	0.73	1 456	802	14.92	-3.20	704	488	1.98	-2.87
India	3 728	5 485	3.11	3.72	1	1	16.98	6.91	4	1	-7.20	-15.54
Indonesia	3 837	4 891	10.18	2.14	0	0	-41.74	..	2	3	-6.05	0.78
Iran	2 154	2 465	0.62	2.43	91	89	9.75	-11.23	54	30	-10.43	7.44
Japan	1 671	1 680	1.67	0.00	915	959	2.82	0.00	7	5	-5.67	0.00
Kazakhstan	240	353	9.21	4.01	225	247	4.02	1.22	17	13	19.01	-1.18
Korea	1 024	1 082	3.80	0.68	212	236	6.05	0.04	56	44	11.36	-2.30
Malaysia	1 708	2 257	0.39	2.88	119	149	11.24	-2.29	220	274	6.45	2.35
Pakistan	1 801	2 691	8.82	3.13	1	2	-17.02	1.07	8	2	0.40	-3.75
Philippines	1 371	1 899	2.51	3.15	386	510	14.78	2.48	2	2	-19.85	-0.20
Saudi Arabia	918	1 310	7.35	2.97	596	438	-6.05	-1.30	50	66	2.18	1.24
Thailand	1 853	2 236	1.06	1.76	3	3	-18.24	0.31	1 247	1 484	6.68	1.52
Türkiye	2 419	3 302	3.37	1.83	51	57	-6.08	0.51	757	1 194	6.55	2.35
Viet Nam	1 514	1 917	8.54	2.16	211	226	12.38	1.44	12	9	44.20	-0.21
OCEANIA	1 614	1 878	2.51	1.22	84	115	7.01	2.14	67	64	3.12	-1.28
Australia	1 361	1 577	2.48	1.22	0	0	..	..	53	49	3.83	-1.91
New Zealand	225	266	2.89	1.11	1	1	4.30	0.00	14	16	0.98	1.00
DEVELOPED COUNTRIES	**52 863**	**56 900**	**2.17**	**0.62**	**4 222**	**4 465**	**0.29**	**-0.39**	**7 513**	**7 513**	**2.09**	**0.40**
DEVELOPING COUNTRIES	**83 689**	**99 347**	**3.37**	**1.66**	**10 355**	**12 079**	**4.01**	**1.19**	**8 215**	**9 031**	**2.90**	**1.03**
LEAST DEVELOPED COUNTRIES (LDC)	3 368	4 526	3.23	2.68	1 296	2 398	6.17	4.49	45	23	16.67	-3.82
OECD[3]	**53 510**	**58 610**	**2.26**	**0.68**	**4 070**	**4 499**	**1.09**	**0.08**	**7 355**	**7 810**	**1.45**	**0.62**
BRICS	**49 213**	**54 302**	**3.25**	**1.09**	**2 144**	**1 364**	**5.73**	**-3.06**	**5 471**	**5 547**	**2.18**	**0.60**

.. Not available

Note: Calendar year; except year ending 30 June for New Zealand. Average 2020-22est: Data for 2022 are estimated.

1. Refers to all current European Union member States.
2. Refers to mainland only. The economies of Chinese Taipei, Hong Kong (China) and Macau (China) are included in the Asia aggregate.
3. Excludes Iceland and Costa Rica but includes all EU member countries.
4. Least-squares growth rate (see glossary).

Source: OECD/FAO (2023), "OECD-FAO Agricultural Outlook", *OECD Agriculture statistics* (database). dx.doi.org/10.1787/agr-outl-data-en

Table C.28.2. Poultry meat projections: Consumption, food

Calendar year

	CONSUMPTION (kt rtc)		Growth (%)[4]		FOOD (kg rwe/cap)[5]		Growth (%)[4]	
	Average 2020-22est	2032	2013-22	2023-32	Average 2020-22est	2032	2013-22	2023-32
WORLD	**135 413**	**156 237**	**2.93**	**1.27**	**10.1**	**10.6**	**1.78**	**0.41**
NORTH AMERICA	21 025	23 080	2.42	0.52	33.3	34.5	1.71	0.00
Canada	1 519	1 747	2.68	1.07	23.5	24.8	1.57	0.28
United States	19 506	21 333	2.40	0.48	34.4	35.7	1.74	-0.01
LATIN AMERICA	26 027	30 477	2.40	1.27	23.4	25.4	1.51	0.60
Argentina	2 103	2 350	2.25	0.93	27.3	28.7	1.44	0.36
Brazil	10 731	11 987	2.62	0.87	29.5	31.3	1.87	0.41
Chile	750	899	1.91	1.47	23.2	27.3	0.80	1.25
Colombia	1 801	2 379	3.72	1.90	20.8	26.1	2.45	1.40
Mexico	4 769	5 478	3.29	1.13	21.9	23.4	2.37	0.48
Paraguay	69	92	3.67	2.66	5.7	6.7	2.48	1.63
Peru	1 841	2 417	4.50	2.58	32.6	38.9	3.01	1.72
EUROPE	20 564	21 559	1.49	0.37	16.3	17.3	1.36	0.53
European Union[1]	11 965	12 258	1.71	0.16	15.9	16.4	1.58	0.31
United Kingdom	2 059	2 298	1.34	0.65	18.1	19.5	0.58	0.36
Russia	4 547	4 711	1.48	0.30	18.6	19.8	1.41	0.60
Ukraine	1 015	1 118	-1.19	1.49	13.9	16.5	-0.66	2.20
AFRICA	9 106	12 613	3.41	2.88	3.9	4.2	0.84	0.59
Egypt	1 506	2 146	3.23	3.44	8.3	10.0	1.18	1.82
Ethiopia	66	78	-0.54	1.82	0.3	0.3	-3.39	-0.41
Nigeria	237	279	2.41	1.73	0.6	0.5	-0.48	-0.67
South Africa	2 300	2 712	1.61	1.37	22.8	24.1	0.24	0.38
ASIA	57 061	66 578	3.88	1.57	7.0	7.7	2.88	0.95
China[2]	24 581	25 223	4.58	0.66	10.0	10.4	4.12	0.79
India	3 725	5 486	3.14	3.73	1.1	1.5	0.80	2.91
Indonesia	3 835	4 888	10.17	2.15	7.8	9.0	9.20	1.30
Iran	2 191	2 525	1.50	1.40	15.1	15.7	0.13	0.53
Japan	2 584	2 633	2.11	0.01	12.3	13.4	2.46	0.59
Kazakhstan	448	587	6.15	2.88	14.0	16.7	4.76	2.00
Korea	1 179	1 274	3.92	0.68	13.5	14.8	3.56	0.84
Malaysia	1 606	2 132	0.32	2.49	29.2	34.6	-1.00	1.48
Pakistan	1 795	2 690	8.80	3.14	4.6	5.8	6.77	1.46
Philippines	1 755	2 407	4.43	3.01	9.3	11.3	2.92	1.84
Saudi Arabia	1 464	1 681	0.33	1.74	24.5	24.8	-1.59	0.64
Thailand	593	752	-6.49	2.42	5.0	6.3	-6.81	2.42
Türkiye	1 713	2 165	1.60	1.52	11.7	14.0	0.25	0.97
Viet Nam	1 712	2 134	8.84	2.09	10.4	12.1	7.80	1.49
OCEANIA	1 630	1 929	2.68	1.36	22.6	23.7	1.07	0.26
Australia	1 307	1 529	2.43	1.34	30.0	31.7	0.99	0.43
New Zealand	212	251	3.04	1.11	24.5	26.7	1.21	0.43
DEVELOPED COUNTRIES	**49 600**	**53 845**	**2.02**	**0.57**	**20.5**	**21.8**	**1.62**	**0.42**
DEVELOPING COUNTRIES	**85 813**	**102 392**	**3.49**	**1.66**	**7.8**	**8.3**	**2.16**	**0.65**
LEAST DEVELOPED COUNTRIES (LDC)	4 619	6 902	3.91	3.31	3.0	3.5	1.54	1.15
OECD[3]	**50 253**	**55 292**	**2.30**	**0.64**	**21.2**	**22.8**	**1.78**	**0.43**
BRICS	**45 884**	**50 119**	**3.49**	**1.01**	**8.1**	**8.5**	**2.67**	**0.59**

Note: Calendar year; except year ending 30 June for New Zealand. Average 2020-22est: Data for 2022 are estimated.

1. Refers to all current European Union member States.
2. Refers to mainland only. The economies of Chinese Taipei, Hong Kong (China) and Macau (China) are included in the Asia aggregate.
3. Excludes Iceland and Costa Rica but includes all EU member countries.
4. Least-squares growth rate (see glossary).
5. Per capita consumption expressed in boneless retail weight. Carcass weight to boneless retail weight conversion factors is 0.6 for poultry meat.

Source: OECD/FAO (2023), "OECD-FAO Agricultural Outlook", *OECD Agriculture statistics* (database). dx.doi.org/10.1787/agr-outl-data-en

ANNEX C

Table C.29.1. Sheep meat projections: Production and trade

Calendar year

	PRODUCTION (kt cwe)[4]		Growth (%)[5]		IMPORTS (kt cwe)[6]		Growth (%)[5]		EXPORTS (kt cwe)[6]		Growth (%)[5]	
	Average 2020-22est	2032	2013-22	2023-32	Average 2020-22est	2032	2013-22	2023-32	Average 2020-22est	2032	2013-22	2023-32
WORLD	**16 206**	**18 644**	**1.99**	**1.27**	**1 091**	**1 166**	**-0.52**	**0.34**	**1 113**	**1 238**	**-0.17**	**0.76**
NORTH AMERICA	85	95	-1.49	1.49	176	164	7.25	-0.61	2	2	-8.06	-0.02
Canada	17	17	0.06	-0.02	22	24	1.11	0.46	0	0	..	..
United States	69	78	-1.84	1.84	154	140	8.42	-0.78	1	1	-8.04	-0.02
LATIN AMERICA	466	505	1.50	0.56	11	11	-12.51	0.07	31	32	4.12	-0.03
Argentina	54	55	-1.02	0.00	0	0	..	..	4	5	11.33	-0.07
Brazil	142	150	2.69	0.48	2	3	-14.69	-0.09	0	0	..	..
Chile	14	14	-0.34	-0.17	0	0	..	..	6	6	0.35	0.26
Colombia	1	3	6.96	7.23	0	0	..	..	0	0	..	..
Mexico	106	110	1.27	0.19	2	1	-22.96	-0.02	2	3	62.59	0.00
Paraguay	3	4	-3.65	2.31	0	0	..	..	0	0	..	..
Peru	38	39	-0.84	-0.03	0	0	..	..	0	0	..	..
EUROPE	1 256	1 288	0.28	0.26	214	198	-4.93	-0.92	144	163	-0.90	2.09
European Union[1]	630	644	0.55	0.27	139	124	-2.81	-1.60	50	66	3.98	3.45
United Kingdom	288	301	-0.71	0.42	65	62	-7.86	0.10	85	86	-3.58	1.05
Russia	216	210	1.19	-0.20	1	0	-48.71	-2.54	2	0	59.55	..
Ukraine	8	0	-12.98	-1.90	0	4	..	7.07	0	0	..	..
AFRICA	3 388	4 272	1.91	2.36	10	13	-24.09	2.07	37	34	1.14	-0.60
Egypt	62	84	-10.17	2.94	0	2	-36.48	16.10	0	0	..	..
Ethiopia	279	378	7.32	3.73	0	0	..	..	15	14	-0.73	1.90
Nigeria	400	515	0.72	2.69	0	0	..	49.49	0	0	..	..
South Africa	173	182	-0.49	0.73	2	2	-21.66	-1.18	3	6	9.79	1.86
ASIA	9 871	11 282	2.64	1.17	657	751	2.46	0.93	25	32	-6.28	1.84
China[2]	5 096	5 521	2.59	0.64	386	396	6.61	0.30	2	2	-9.61	-0.07
India	850	970	1.64	1.27	0	0	..	..	8	12	-11.88	3.60
Indonesia	118	141	1.66	1.64	2	4	-0.46	2.19	0	0	..	..
Iran	357	387	-1.78	0.66	4	2	0.54	0.03	0	0	..	..
Japan	0	0	..	..	21	19	0.86	-1.28	0	0	..	..
Kazakhstan	175	196	1.18	1.02	0	0	..	..	3	5	111.61	0.09
Korea	2	2	2.46	0.00	19	18	15.03	-0.11	0	0	..	..
Malaysia	1	0	-10.27	..	35	47	2.25	1.52	0	0	..	..
Pakistan	765	982	7.15	2.27	0	0	..	..	5	3	-11.26	0.58
Philippines	33	45	-6.89	2.29	0	1	-6.45	7.49	0	0	..	..
Saudi Arabia	0	0	..	..	24	35	-11.34	2.19	0	0	-15.59	-2.14
Thailand	2	2	0.15	0.63	1	1	-5.57	0.92	0	0	..	..
Türkiye	481	751	6.64	2.76	0	0	..	..	1	5	30.08	3.55
Viet Nam	21	26	11.61	1.89	0	4	-23.88	31.13	0	0	..	..
OCEANIA	1 140	1 204	-0.43	-0.01	23	28	-2.90	-0.29	876	976	0.00	0.60
Australia	693	773	0.09	0.16	0	0	..	..	452	553	1.27	1.26
New Zealand	446	431	-1.24	-0.31	3	3	-3.75	0.00	424	423	-1.25	-0.19
DEVELOPED COUNTRIES	**3 383**	**3 635**	**0.06**	**0.54**	**420**	**392**	**-0.94**	**-0.84**	**1 027**	**1 152**	**-0.05**	**0.80**
DEVELOPING COUNTRIES	**12 822**	**15 009**	**2.56**	**1.45**	**671**	**774**	**-0.20**	**1.00**	**86**	**86**	**-1.52**	**0.24**
LEAST DEVELOPED COUNTRIES (LDC)	2 085	2 648	2.20	2.31	2	2	-6.68	-0.03	4	4	0.44	-2.30
OECD[3]	**2 782**	**3 164**	**0.75**	**0.77**	**436**	**402**	**-0.36**	**-0.86**	**1 021**	**1 143**	**-0.13**	**0.79**
BRICS	**6 477**	**7 032**	**2.32**	**0.69**	**391**	**401**	**5.28**	**0.29**	**15**	**20**	**-6.56**	**2.62**

.. Not available

Note: Calendar year; except year ending 30 June for New Zealand. Average 2020-22est: Data for 2022 are estimated.

1. Refers to all current European Union member States.
2. Refers to mainland only. The economies of Chinese Taipei, Hong Kong (China) and Macau (China) are included in the Asia aggregate.
3. Excludes Iceland and Costa Rica but includes all EU member countries.
4. Gross indigenous production.
5. Least-squares growth rate (see glossary).
6. Excludes trade of live animals.

Source: OECD/FAO (2023), "OECD-FAO Agricultural Outlook", *OECD Agriculture statistics* (database). dx.doi.org/10.1787/agr-outl-data-en

Table C.29.2. Sheep meat projections: Consumption, food

Calendar year

	CONSUMPTION (kt cwe)		Growth (%)[4]		FOOD (kg rwe/cap)[5]		Growth (%)[4]	
	Average 2020-22est	2032	2013-22	2023-32	Average 2020-22est	2032	2013-22	2023-32
WORLD	**16 259**	**18 724**	**1.97**	**1.26**	**1.3**	**1.4**	**0.80**	**0.41**
NORTH AMERICA	254	250	4.08	0.12	0.4	0.4	3.36	-0.41
Canada	38	41	0.68	0.28	0.7	0.6	-0.42	-0.51
United States	216	209	4.79	0.09	0.4	0.4	4.12	-0.41
LATIN AMERICA	447	483	0.72	0.57	0.5	0.5	0.03	-0.12
Argentina	50	50	-1.68	0.00	0.7	0.7	-2.46	-0.57
Brazil	145	153	2.01	0.40	0.7	0.7	1.26	-0.06
Chile	9	8	-0.76	-0.45	0.3	0.3	-1.85	-0.66
Colombia	1	3	7.24	7.10	0.0	0.0	5.93	6.57
Mexico	107	109	-0.35	0.19	0.5	0.5	-1.24	-0.45
Paraguay	3	4	-3.64	2.31	0.3	0.3	-4.75	1.28
Peru	38	39	-0.84	-0.03	0.7	0.7	-2.25	-0.86
EUROPE	1 265	1 266	-0.87	-0.08	1.1	1.1	-1.02	0.08
European Union[1]	669	660	-0.67	-0.25	1.0	1.0	-0.80	-0.11
United Kingdom	269	277	-1.98	0.16	2.6	2.6	-2.72	-0.13
Russia	211	207	0.32	-0.20	0.9	1.0	0.25	0.10
Ukraine	8	4	-12.34	4.54	0.1	0.1	-11.88	5.27
AFRICA	3 322	4 218	1.60	2.44	1.5	1.5	-0.99	0.15
Egypt	63	85	-14.92	3.11	0.4	0.4	-16.61	1.50
Ethiopia	265	364	7.94	3.81	1.3	1.4	4.84	1.54
Nigeria	409	522	0.93	2.53	1.1	1.1	-1.92	0.11
South Africa	172	177	-1.85	0.68	1.9	1.7	-3.18	-0.30
ASIA	10 696	12 255	2.58	1.16	1.4	1.6	1.59	0.59
China[2]	5 480	5 915	2.84	0.61	2.5	2.7	2.39	0.74
India	830	945	1.79	1.26	0.3	0.3	-0.52	0.46
Indonesia	119	144	1.63	1.65	0.3	0.3	0.73	0.82
Iran	344	375	-1.33	0.69	2.6	2.6	-2.66	-0.17
Japan	21	19	0.86	-1.28	0.1	0.1	1.21	-0.71
Kazakhstan	172	191	0.85	1.04	5.9	6.0	-0.48	0.18
Korea	20	19	12.53	-0.10	0.2	0.2	12.14	0.06
Malaysia	39	51	1.65	1.38	0.8	0.9	0.31	0.38
Pakistan	760	979	7.39	2.28	2.2	2.3	5.38	0.61
Philippines	34	46	-6.88	2.35	0.2	0.2	-8.23	1.19
Saudi Arabia	183	216	-0.65	1.16	3.4	3.5	-2.55	0.07
Thailand	3	3	-1.89	0.73	0.0	0.0	-2.24	0.72
Türkiye	480	746	6.57	2.76	3.6	5.3	5.15	2.20
Viet Nam	22	30	8.22	3.55	0.1	0.2	7.19	2.94
OCEANIA	275	252	-1.02	-1.95	4.2	3.4	-2.57	-3.02
Australia	237	210	-0.09	-2.22	6.0	4.8	-1.51	-3.10
New Zealand	17	16	-8.35	-0.52	2.2	1.8	-9.98	-1.20
DEVELOPED COUNTRIES	**2 697**	**2 808**	**-0.08**	**0.29**	**1.2**	**1.2**	**-0.50**	**0.14**
DEVELOPING COUNTRIES	**13 561**	**15 915**	**2.42**	**1.44**	**1.3**	**1.4**	**1.09**	**0.45**
LEAST DEVELOPED COUNTRIES (LDC)	2 042	2 624	2.60	2.41	1.4	1.5	0.26	0.27
OECD[3]	**2 135**	**2 378**	**1.06**	**0.53**	**1.0**	**1.1**	**0.51**	**0.31**
BRICS	**6 837**	**7 397**	**2.46**	**0.67**	**1.3**	**1.4**	**1.62**	**0.30**

Note: Calendar year; except year ending 30 June for New Zealand. Average 2020-22est: Data for 2022 are estimated.

1. Refers to all current European Union member States.
2. Refers to mainland only. The economies of Chinese Taipei, Hong Kong (China) and Macau (China) are included in the Asia aggregate.
3. Excludes Iceland and Costa Rica but includes all EU member countries.
4. Least-squares growth rate (see glossary).
5. Per capita consumption expressed in boneless retail weight. Carcass weight to boneless retail weight conversion factors is 0.66 for sheep meat.

Source: OECD/FAO (2023), "OECD-FAO Agricultural Outlook", *OECD Agriculture statistics* (database). dx.doi.org/10.1787/agr-outl-data-en

ANNEX C

Table C.30. Main policy assumptions for meat markets

		Average 2020-22est	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
ARGENTINA												
Beef export tax[2]	%	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1
CANADA												
Beef tariff-quota	kt pw	129.2	129.2	129.2	129.2	129.2	129.2	129.2	129.2	129.2	129.2	129.2
In-quota tariff	%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Out-of-quota tariff	%	26.5	26.5	26.5	26.5	26.5	26.5	26.5	26.5	26.5	26.5	26.5
Poultry meat tariff-quota	kt pw	105.0	110.4	113.0	114.4	117.1	119.7	122.2	124.8	127.4	130.0	132.5
In-quota tariff	%	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Out-of-quota tariff	%	249.0	249.0	249.0	249.0	249.0	249.0	249.0	249.0	249.0	249.0	249.0
EUROPEAN UNION[3,4]												
Voluntary coupled support												
Beef and veal[5]	mln EUR	1 606	1 751	1 733	1 713	1 694	1 646	1 646	1 646	1 646	1 646	1 646
Sheep and goat meat[6]	mln EUR	528	615	614	612	609	605	605	605	605	605	605
Beef basic price[1]	EUR/kg dwt	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	3.2
Beef tariff-quota	kt cwe	335.9	325.6	327.1	328.7	329.2	329.7	330.2	330.7	331.2	331.2	331.2
Pig tariff-quota	kt cwe	213.7	213.0	213.9	214.8	215.7	216.6	217.5	218.4	219.3	220.2	220.2
Poultry tariff-quota	kt rtc	878.4	811.3	813.3	815.4	817.4	819.5	821.6	823.6	825.7	825.7	825.7
Sheep meat tariff-quota	kt cwe	207.5	163.3	163.5	163.7	163.9	164.1	164.3	164.5	164.7	164.9	164.9
JAPAN[7]												
Beef stabilisation prices												
Upper price	JPY/kg dwt	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lower price	JPY/kg dwt	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Beef tariff	%	25.0	23.5	22.7	21.8	21.0	20.2	18.6	16.8	15.0	13.1	11.3
Pigmeat stabilisation prices												
Upper price	JPY/kg dwt	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lower price	JPY/kg dwt	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pig meat import system												
Tariff	%	1.7	1.3	1.0	0.8	0.5	0.3	0.1	0.0	0.0	0.0	0.0
Standard import price	JPY/kg dwt	398.4	430.1	409.7	391.5	379.9	370.8	362.6	357.9	353.6	349.4	345.3
Poultry meat tariff	%	11.9	11.9	11.9	11.9	11.9	11.9	11.9	11.9	11.9	11.9	11.9
KOREA												
Beef tariff	%	13.3	8.0	5.3	2.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pigmeat tariff	%	13.3	8.0	5.3	2.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Poultry meat tariff	%	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0
MEXICO[8]												
Beef and veal tariff-quota	kt pw	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
In-quota tariff	%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Out-of-quota tariff[9]	%	75.0	75.0	75.0	75.0	75.0	75.0	75.0	75.0	75.0	75.0	75.0
Poultry meat tariff-quota	kt pw	10.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
In-quota tariff	%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Out-of-quota tariff	%	75.0	75.0	75.0	75.0	75.0	75.0	75.0	75.0	75.0	75.0	75.0
RUSSIA												
Beef tariff-quota	kt pw	570.0	570.0	570.0	570.0	570.0	570.0	570.0	570.0	570.0	570.0	570.0
In-quota tariff	%	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0
Out-of-quota tariff	%	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0
Pigmeat tariff-quota[10]	kt pw	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
In-quota tariff	%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Out-of-quota tariff	%	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0
Poultry tariff-quota	kt pw	364.0	364.0	364.0	364.0	364.0	364.0	364.0	364.0	364.0	364.0	364.0
In-quota tariff	%	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0
Out-of-quota tariff	%	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0
UNITED STATES												
Beef tariff-quota	kt pw	696.6	696.6	696.6	696.6	696.6	696.6	696.6	696.6	696.6	696.6	696.6
In-quota tariff	%	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8
Out-of-quota tariff	%	26.4	26.4	26.4	26.4	26.4	26.4	26.4	26.4	26.4	26.4	26.4

Table C.30. Main policy assumptions for meat markets *(cont.)*

		Average 2020-22est	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
CHINA												
Beef tariff	%	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
Pigmeat tariff	%	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0
Sheep meat tariff	%	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0
Poultry meat tariff	%	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
INDIA												
Beef tariff	%	38.5	38.5	38.5	38.5	38.5	38.5	38.5	38.5	38.5	38.5	38.5
Pigmeat tariff	%	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0
Sheep meat tariff	%	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0
Poultry meat tariff	%	36.4	36.4	36.4	36.4	36.4	36.4	36.4	36.4	36.4	36.4	36.4
SOUTH AFRICA												
Beef tariff	%	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0
Pigmeat tariff	%	2.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sheep meat tariff	%	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0
Poultry meat tariff	%	36.6	40.2	40.2	40.2	40.2	40.2	40.2	40.2	40.2	40.2	40.2

Note: Average 2020-22est: Data for 2022 are estimated.

1. Price for R3 grade male cattle.
2. In Argentina, a temporary export tax is applied on all goods from September 4th 2018 until December 31st 2020.
3. Since 2015 the Basic payment scheme (BPS) holds, which shall account for the maximum of the national direct payment envelopes. On top of this, compulsory policy instruments have been introduced: the Green Payment and young farmer scheme.More details can be found in here: https://ec.europa.eu/info/sites/info/files/food-farming-fisheries/key_policies/documents/voluntary-coupled-support-note-revised-aug2018_en.pdf
4. Refers to all current European Union member States.
5. Implemented in 24 Member States.
6. Implemented in 22 Member States.
7. Year beginning 1 April.
8. Intended for countries which whom Mexico has no free trade agreements.
9. 25% for frozen beef.
10. Eliminated in 2020 and replaced by import tariff.

Source: OECD/FAO (2023), "OECD-FAO Agricultural Outlook", *OECD Agriculture statistics* (database). dx.doi.org/10.1787/agr-outl-data-en