

6 Meat

This chapter describes recent market developments and highlights the medium-term projections for world meat markets for the period 2021-30. Price, production, consumption and trade developments for beef and veal, pigmeat, poultry, and sheepmeat are discussed. The chapter concludes with a discussion of important risks and uncertainties that might affect world meat markets over the next ten marketing years.

6.1. Projection highlights

International meat prices declined in 2020 due to the impact of COVID-19. Logistical hurdles and reduced food service and household spending temporarily curtailed import demand by some leading importing countries. COVID-19 related market disturbances reduced incomes in net meat-importing, low-income countries, significantly eroding household purchasing power and compelling consumers to substitute the intake of meat products with cheaper alternatives. The fall in international meat prices would have been greater if the People's Republic of China (hereafter "China") had not sharply increased its import demand due to the African Swine Fever (ASF) outbreak, which continues to limit local production. Significantly higher feed costs further hampered the profitability of the meat sector at the start of the outlook period.

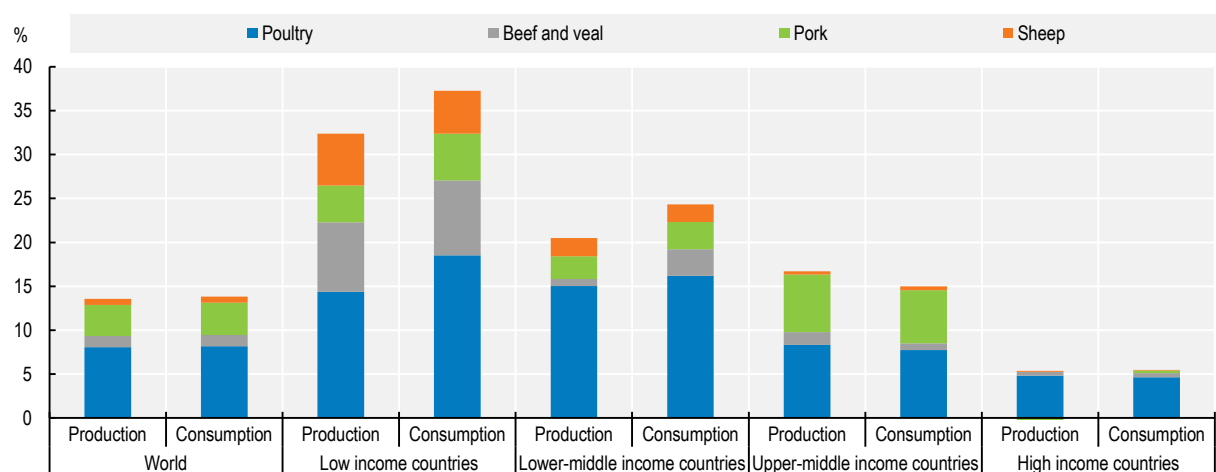
This year's edition of the *OECD-FAO Agricultural Outlook* projects the global meat supply to expand over the projection period, reaching 374 Mt by 2030. Herd and flock expansion, especially in the Americas and China, combined with increased per animal productivity (average slaughter weight, improved breeding, and better feed formulations) will support the meat market. China is projected to account for most of the total increase in meat production, followed by Brazil and the United States. Increase in global meat production is led mainly by growth in poultry production. The increase in pigmeat production will remain limited in the first three years of the Outlook due to the slow recovery from the outbreaks of ASF in China, the Philippines and Viet Nam. The recovery process is assumed to be completed by 2023, especially in China, supported by the rapid development of large scale production facilities that can ensure biosecurity.

Growth in global consumption of meat proteins over the next decade is projected to increase by 14% by 2030 compared to the base period average of 2018-2020, driven largely by income and population growth. Protein availability from beef, pork, poultry, and sheep meat is projected to grow 5.9%, 13.1%, 17.8% and 15.7% respectively by 2030 (Figure 6.1). In high income countries, however, changes in consumer preferences, ageing, and slower growing populations will lead to a levelling off in per capita meat consumption and a move towards the consumption of higher valued meat cuts.

Meat consumption has been shifting towards poultry. In lower income developing countries this reflects the lower price of poultry as compared to other meats, while in high-income countries this indicates an increased preference for white meats which are more convenient to prepare and perceived as a healthier food choice. Globally, poultry meat is expected to represent 41% of all the protein from meat sources in 2030, an increase of 2 percentage points when compared to the base period. The global shares of other meat products are lower: beef (20%), pigmeat (34%), and sheep meat (5%). Per capita meat consumption in China is projected to return to its longer term trend by 2023, as the ASF impact on domestic pigmeat prices abates. As a result, one-third of the overall increase in meat consumption over the projection period is attributed to pigmeat. China will account for 70% of the increase in pigmeat consumption from the reference period to 2030. In light of these factors, global meat consumption per capita is projected to increase 0.3% p.a. to 35.4 kg in retail weight equivalent (r.w.e.) by 2030. Over one-half of this increase is due to higher per capita consumption of poultry meat.


International meat trade will expand in response to growing demand from countries in Asia and the Near East, where production will remain largely insufficient to meet demand. Import demand in several middle and high income Asian countries has been steadily increasing in recent years due to a shift toward diets that include higher quantities of animal products. International trade agreements have included specific provisions for meat products that improve market access and create trade opportunities.

Figure 6.1. Growth in meat production and consumption on a protein basis, 2021 to 2030



Note: The 38 individual countries and 11 regional aggregates in the baseline are classified into the 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 (2021), "OECD-FAO Agricultural Outlook", OECD Agriculture statistics (database), <http://dx.doi.org/10.1787/agr-outl-data-en>.

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This *Outlook* projects that nominal meat prices for beef, pork, and poultry will recover in 2021, as demand in high income countries recovers from the COVID-19 pandemic. Further nominal price increases are foreseen, albeit modestly, up to 2025 as income and consumer spending are assumed to recover in other countries, especially in middle-income countries where meat demand is responsive to income. Over the first years of the projection period, supply constraints in several Asian countries, particularly China, will induce higher import demand and lead to higher prices. This is especially relevant for the pigmeat sector, where ASF-related losses have decreased production in Asia.

Greenhouse gas emissions (GHG) from meat production comprised about 54% of total emissions from agriculture during the 2018-20 base period (in CO₂ eq. basis). The increase of emissions by the meat sector of 5% by 2030 is considerably less than the increase in meat production, due primarily to the increased contribution of poultry production and to projected higher meat output from a given stock of animals. The adoption of new technologies to reduce methane emissions, for example feed supplements that are not widely available today, could further reduce future per unit emissions.

Animal disease outbreaks, sanitary restrictions, and trade policies will affect the evolution and dynamics in world meat markets. The effectiveness of global efforts to prevent and control the spread of ASF will significantly influence the growth in the amount of meat traded internationally. It remains uncertain by how much global import demand will increase to satisfy the ASF-induced meat deficits in affected countries. This is expected to add volatility to meat prices in the early part of the projection period. The modalities of existing or future trade agreements (for example, the African Continental Free Trade Area or the Regional Comprehensive Economic Partnership) will influence the size of trade flows and meat trade patterns over the outlook period, both globally and bilaterally.

The projections assume that the economic impact of the COVID-19 pandemic will be short-lived and mainly affect the meat sector through income effects that reduce demand for higher valued meat products. Some uncertainties remain on the food services sector's recovery path, which represents a significant part of meat consumption and, in particular, sales of expensive cuts which are not fully replaced by retail sales. These uncertainties may also affect the supply of meat and meat processing, given that health protocols

and restrictions in the movement of people have led to several meat processing facilities and slaughterers to lower their operational capacities.

The projections assume that consumer preferences will evolve following historical patterns and that income and prices will shape diets. However, other factors that could influence the meat outlook over the medium term include changing consumer preferences and attitudes towards lower meat protein consumption at a quicker pace than has been observed in the past years. The emergence, albeit from a low base, of alternative protein sources, such as cultured and plant-based substitutes for meat, and automation of the labour intensive processing, packaging (including labelling) and distribution sectors will also influence projections.

6.2. Recent market developments

International meat prices declined in 2020 due to the impact of COVID-19, which temporarily curtailed meat demand by some leading consuming and importing countries. Logistical hurdles, reduced food service, reduced household spending due to lower incomes all contributed to this reduced demand. The fall in international meat prices would have been larger had there not been a sharp rise in meat imports by China, where ASF continues to limit local production.

World meat production remained stable in 2020 at an estimated 328 Mt, as output increases in poultry and ovine meats offset contractions in pig and bovine meat production. Total poultry meat production in 2020 is estimated at 134 Mt, up 1.2 % from 2019, underpinned by a sharp rise in demand in China.

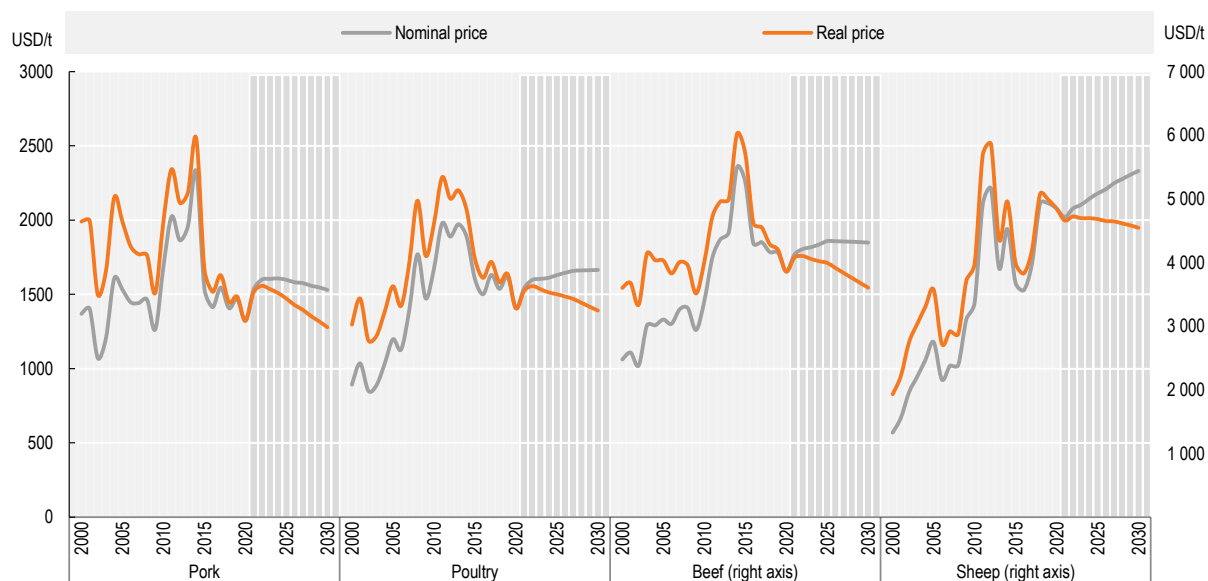
The on-going outbreak of ASF was the main factor causing reduced pigmeat production in East Asia, especially in China. Bovine meat output also fell in some major producing countries, caused by the limited availability of animals for slaughter (in Australia, New Zealand, and the European Union) and regulations associated with animal welfare, and the purchasing and transport of animals by the processing sector (India).

World meat imports in 2020 are expected to have reached 36.3 MT, growing by 6.3% year-on-year, led mainly by AFS-induced imports by China; excluding China, global meat imports fell by 1.4 Mt, or 4.3%. Leading exporters – including Brazil, Canada, the European Union, the Russian Federation (hereafter “Russia”), and the United States – supplied much of the expanded import demand for meat.

6.3. Prices

Meat prices are anticipated to rebound from COVID-19 induced lows in 2020, and to rise moderately over the medium term as demand recovers and higher feed costs are passed through; yet, they are expected to remain well below their peaks of ten years ago (Figure 6.2). The projected rise in nominal meat prices is expected for all meats, although each sub-sector has different dynamics given their respective biological supply responses to recent shocks. However, the ratio of nominal meat prices over feed prices is projected to decline, albeit at a slower pace compared to recent years (Figure 6.3). The downward trend in this ratio reflects ongoing feed productivity gains within the sector, whereby less feed is required to produce a unit of meat output. Nevertheless, higher feed costs are further hampering the profitability of meat production at the start of the projection period.

Figure 6.2. World reference prices for meat -rising in nominal, but falling in real terms

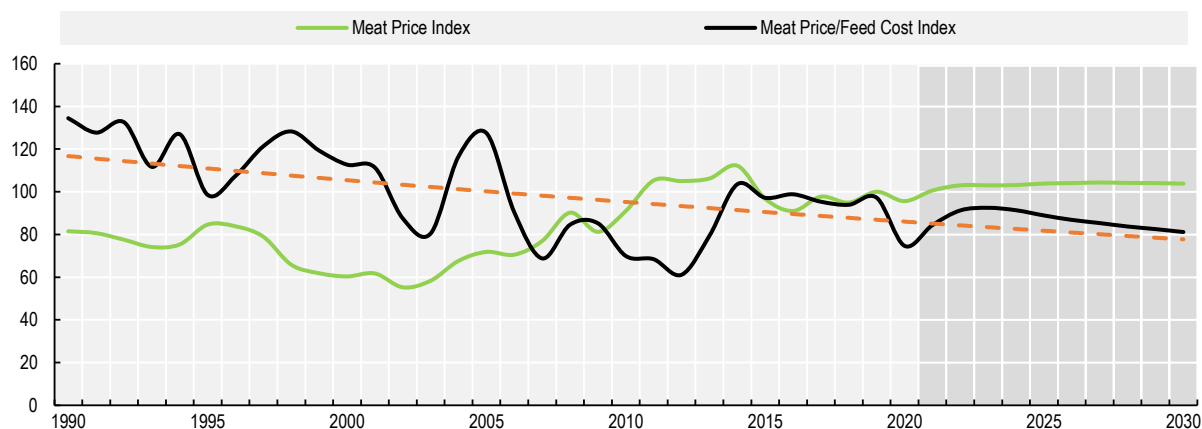


Note: Real prices are nominal world prices deflated by the US GDP deflator (2020=1). US Barrows and gilts, National base 51-52% lean c.w.e. Brazil: Export unit value for chicken (f.o.b.) product weight. US Choice steers, 5-area Direct c.w.e., Total all grades. New Zealand lamb price c.w.e., all grade average.

Source: OECD/FAO (2021), "OECD-FAO Agricultural Outlook", OECD Agriculture statistics (database), <http://dx.doi.org/10.1787/agr-outl-data-en>.

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Figure 6.3. FAO Food Price Index for meat and its ratio to feed prices



Note: Index: average 2014-2016=100. Meat price Index: computed from average prices of four types of meat.

Source: OECD/FAO (2021), "OECD-FAO Agricultural Outlook", OECD Agriculture statistics (database), <http://dx.doi.org/10.1787/agr-outl-data-en>.

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All meat prices are projected to fall from the base period levels of 2018-20, and back to longer term real trends as costs of meat production decline in real terms. The exception is sheep meat, the prices of which have displayed an increasing trend as exports from New Zealand have been constrained in view of the rising opportunity costs of pasture land induced by rising long-term real prices of dairy products. The reference price for pigmeat in heavily traded Pacific markets (represented by the US national base price)

will increase early in the projection period to meet robust demand, particularly from China, but will be contained by rising export supplies from Brazil, the European Union, and the United States. Poultry prices (represented by Brazil's fresh, chilled or frozen export prices) are expected to closely follow grain prices given the high share of feed costs in their production and the swift response of production to global rising demand. Beef prices (represented by US choice steer prices) are projected to increase from cyclically lower base period levels, but to remain constrained as supplies and cattle inventory levels increase in key exporting countries such as Argentina, Australia, and the United States.

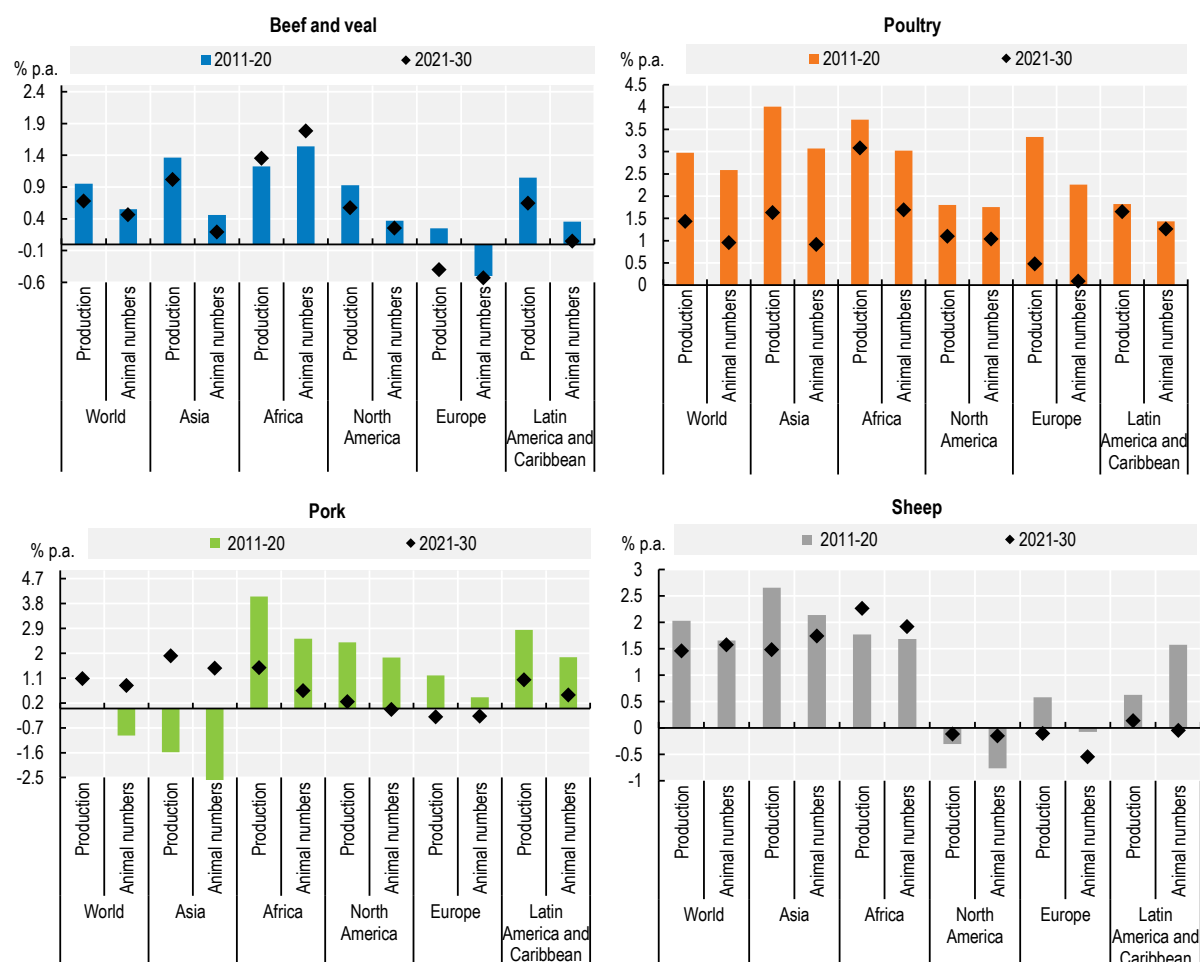
6.4. Production

Global meat production is projected to expand by nearly 44 Mt by 2030, reaching 373 Mt on the basis of higher profitability, especially in the first years of the outlook period as meat prices rebound post-COVID-19 (Figure 6.3). Overall, most meat production growth will occur in developing regions, which will account for 84% of the additional output. The market share of the Asia and Pacific regions will return to 41%, after dipping during the ASF crisis, mainly due to developments in China which is the world's largest meat producer. The production share of the world's top 5 meat producers – China, the United States, the European Union, Brazil, and Russia – will gradually trend downwards from its current level, illustrating an emerging broader base for global production. Globally, low real interest rates will facilitate livestock expansion, and the increasing size and consolidation of production units towards a more integrated production system, especially in emerging developing countries (Figure 6.4).

Poultry meat will continue to be the primary driver of meat production growth, albeit rising at a slower rate in the projection period relative to the past decade. Favourable meat-to-feed ratios compared to other ruminants, together with its short production cycle, enables producers to respond quickly to market signals while allowing for rapid improvements in genetics, animal health, and feeding practices. Production will expand rapidly from sustained productivity gains in China, Brazil, and the United States, and investments made in the European Union (due to lower production costs in Hungary, Poland and Romania). Rapid expansion is foreseen in Asia as the shift away from pigmeat in the short term will benefit poultry in the medium term.

Pigmeat output is projected to rise to 127 Mt by 2030, up 13% from an ASF-reduced base level in 2018-2020¹ and benefiting from more favourable meat-to-feed ratios compared to beef meat production. The ASF outbreak across Asia, starting in late 2018, will continue to affect many countries in the early years of the outlook period, with China, the Philippines and Viet Nam suffering the greatest impact. It is projected that ASF outbreaks will continue to keep global pigmeat output below previous peak levels until 2023, after which it is expected to steadily increase over the remainder of the outlook period. This *Outlook* assumes that pigmeat production in China and Viet Nam will start to increase in 2021 and attain 2017 levels by 2023. Most of the pigmeat production increase in ASF-affected regions will be the result of a shift away from backyard production facilities to commercial production facilities. Pigmeat production in the European Union is projected to decrease slightly as environmental and public concerns are expected to limit its expansion. Russia, the fourth largest pigmeat producer, has almost doubled output in the last decade in response to import bans and domestic policies to restructure and stimulate production. It is projected to expand production by a further 10% by 2030.

Figure 6.4. Production of meat and animal inventories by type



Source: OECD/FAO (2021), "OECD-FAO Agricultural Outlook", OECD Agriculture statistics (database), <http://dx.doi.org/10.1787/agr-outl-data-en>.

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Beef production will grow to 75 Mt by 2030, just 5.8% higher than in the base period. Slow growth is attributable to weak beef demand as consumers shift preferences to poultry meat. Sub-Saharan Africa is projected to have the strongest growth rate at 15%, due to high population growth. In the major producing and exporting regions, growth will be more modest. In North America, the largest producing region, beef production is projected to grow 6% by 2030. Production in Europe is projected to fall 5% as inventories of dairy cows, responsible for approximately two-thirds of the beef supply, will decrease following productivity gains in the milk sector. Other factors limiting the growth potential of this sector in the European Union are a reduction in suckler cowherds due to their low profitability, escalating competition in export markets, and declining domestic demand. In Australia, beef supply will remain tight as above average pasture production encouraged farmers to increase their livestock inventories, a significant change from the drought conditions that have prevailed over the past few years. A gradual recovery in production is expected to follow, but herd rebuilding is expected to take several years. In India, beef production is projected to fall by 33% by 2030 due to reforms in animal transportation and collection regulations that affect the welfare of animals; these are assumed to remain in place for the duration of the outlook period. Overall, beef producers have less ability to increase slaughter in the short term but have more flexibility to increase carcass weights,

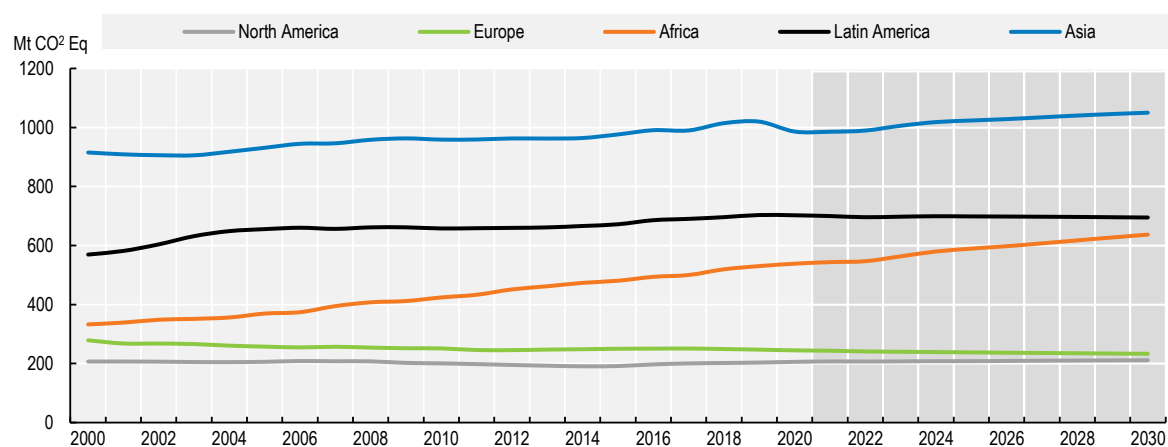
meaning that in the early years of this *Outlook* beef production will be due to higher efficiency rather than more slaughtered animals, barring any severe droughts.

Growth in sheep meat production will mostly originate in Asia, led by China, Pakistan, and India but significant increases in production are projected to occur in Africa, particularly in the least developed countries of Sub-Saharan Africa. Despite limitations linked to urbanisation, desertification, and the availability of feed in some countries, sheep and goats are well adapted to the region and the extensive production systems it utilises. In Oceania, production growth is expected to increase moderately because of ongoing competition for pastureland from beef and dairy in New Zealand, which is the major exporter, as well as the extreme and prolonged drought in Australia where total sheep numbers fell from 72 to 63 million from 2017 to 2020. Sheep meat production in the European Union is expected to remain stable as it will be sustained by the voluntary coupled support in the main sheep-producing Member States.

The projections assume that situations due to COVID-19 and animal diseases (ASF and Highly Pathogenic Avian Influenza – HPAI) will normalise in the short term, and that no further critical shocks will hit feed grain markets. As a result, meat supply will rise in response to increasing demand over the medium term with further intensification of production and efficiency gains. If the situation evolves differently, these projections will need to be revised accordingly.

6.4.1. Greenhouse gas emissions will increase slowly

It is estimated that humans and the animals raised for food constitute 96% of all mammals on earth, and that poultry represents 70% of all live birds.² It is projected that stocks of farmed animals for meat will increase during the next decade, rising 11%, 9%, 2% and 18% for poultry, pigs, beef cattle and sheep respectively. These projections imply higher output-to-animal inventory ratios, which while slowing compared to the previous decade, represent continued increases in the productivity of animal stocks over the period, by 6%, 3%, 4% and a 2% respectively. These changes in herd inventories and productivity increases are reflected in the meat sector emissions, which are projected to rise by 5% by 2030. This growth is considerably less than the rise in meat production due primarily to shifts towards poultry production, national low carbon emission initiatives, and increased productivity which yields higher meat output from a given stock of animals. New technologies that reduce methane emissions which are not widely available at present, such as feed supplements and seaweed, could further reduce future per unit emissions. The strongest growth in meat-related greenhouse gas emissions will be in Africa (Figure 6.5). A renewed effort to reduce GHG emissions could include policies such as carbon taxes and specific regulations combined with incentives to adopt technologies and production systems that reduce the sector's GHG footprint.

Figure 6.5. Strongest growth in GHG emissions from meat in Africa

Note: Estimates are based on historical time series from the FAOSTAT Emissions Agriculture databases which are extended with the Outlook database. Emission types that are not related to any Outlook variable (organic soil cultivation and burning Savannahs) are kept constant at their latest available value.

Source: FAO (2021). FAOSTAT Emissions-Agriculture Database, <http://www.fao.org/faostat/en/#data/GT>; OECD/FAO (2021), "OECD-FAO Agricultural Outlook", OECD Agriculture statistics (database), <http://dx.doi.org/10.1787/agr-outl-data-en>.

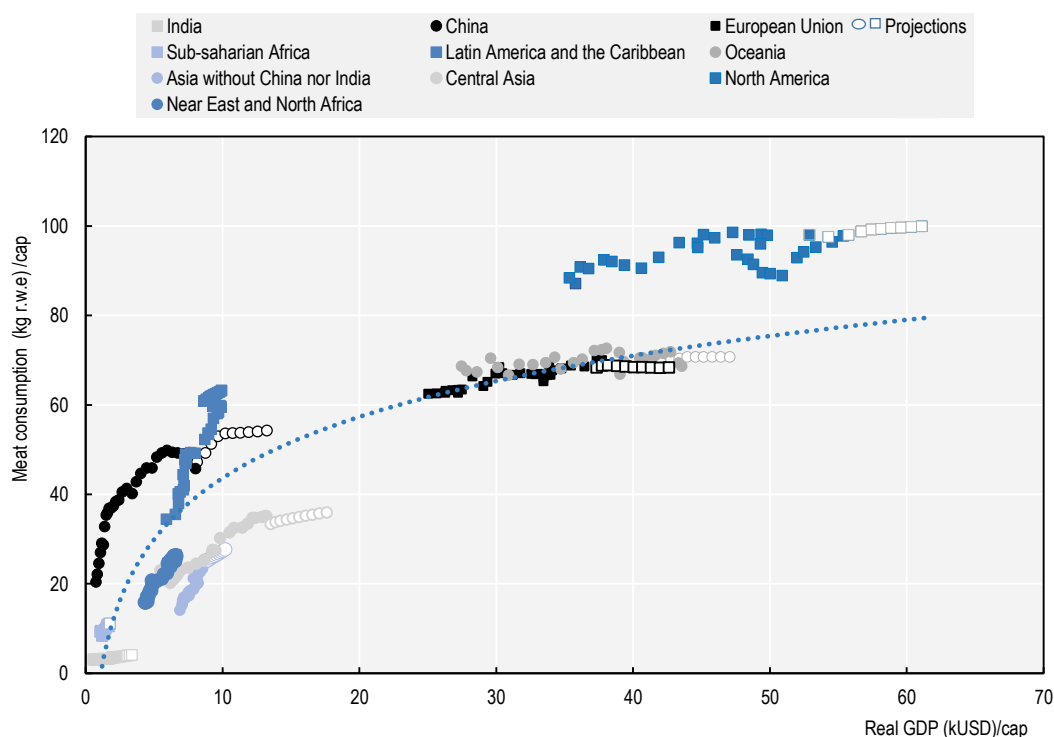
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6.5. Consumption

Determinants of meat consumption are complex. Demographics, urbanisation, incomes, prices, tradition, religious beliefs, cultural norms, and environmental, ethical/animal welfare and health concerns are key factors that affect not only the level but also the type of meat consumption. The past several decades have witnessed considerable changes in the impact of each of these factors across a broad array of countries and regions. Population growth is clearly the main driver of increased consumption, and the projected global increase of 11% will underpin a projected increase of 14% in global meat consumption by 2030, compared to the base period of this *Outlook* (Figure 6.6). It is the main reason why meat consumption is projected to grow by 30% in Africa, 18% in the Asia and Pacific region, and 12% in the Latin American region; the projected increase in meat consumption is 0.4% in Europe and 9% in North America.

Economic growth is another important driver of meat consumption. Income growth enables the purchase of meat, which is typically a more expensive source of calories and proteins. It is also accompanied by other structural changes such as greater urbanisation, higher labour participation, and food service expenditures that encourage higher meat purchases. The response of per capita meat consumption to income increases is demonstrably higher at lower incomes, and less so at higher incomes where consumption is largely saturated and limited by other factors such as environmental, and ethical/animal welfare and health concerns.

Figure 6.6. Income impact on per capita meat consumption per region, 1990 to 2030



Source: OECD/FAO (2021), "OECD-FAO Agricultural Outlook", OECD Agriculture statistics (database), <http://dx.doi.org/10.1787/agr-outl-data-en>.

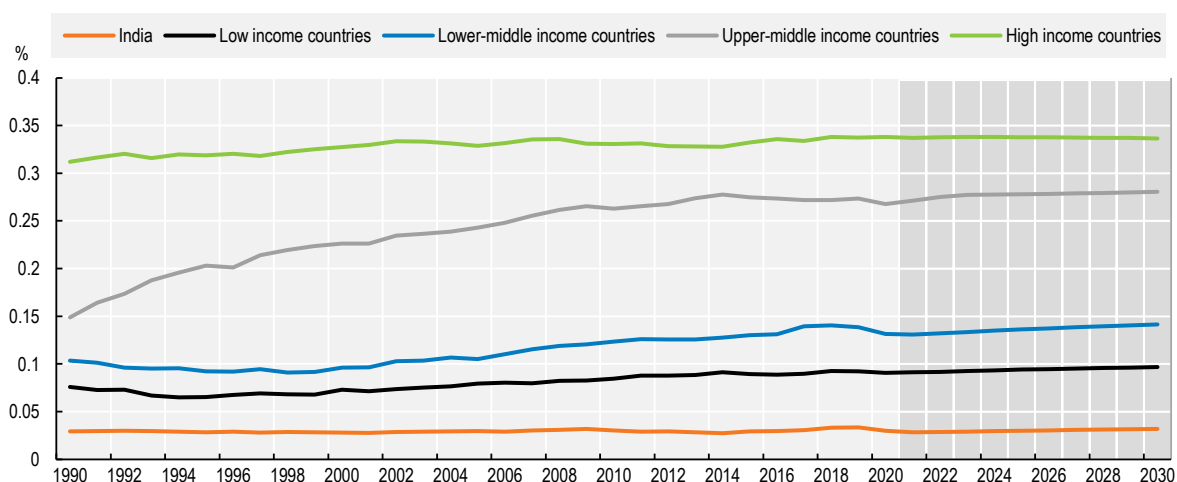
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Empirical evidence on consumer behaviour suggests that increases in income stimulate a higher consumption of high value foods such as animal protein compared to other foods such as carbohydrates. In general, the evidence since 1990 suggests that such a shift has been marginal (Figure 6.7). The shares of meat proteins in total protein availability has increased somewhat for upper middle-income countries, but recently less so or not at all for lower middle-income and low-income countries when income increases have not been high enough to stimulate a dietary shift, or in high-income countries where diets remained unchanged. These trends are not anticipated to change much over the next decade. Indeed, it is possible that higher incomes in lower middle-income and low-income countries in particular may induce higher per capita food consumption, but not necessarily a higher share of meats in diets.

A clear trend is the rise of poultry meat consumption in virtually all countries and regions (Figure 6.7). Consumers are attracted to poultry due to lower prices, product consistency and adaptability, and higher protein/lower fat content. Consumption of poultry meat is projected to increase globally to 152 Mt over the projection period, accounting for 52% of the additional meat consumed. On a per capita basis, the expected robust growth rates in poultry consumption reflect the significant role it plays in the national diets of several populous developing countries, including China and India.

Figure 6.7. Marginal shift in composition of food consumption toward meat

Share of meat protein in total protein consumption



Note: The 38 individual countries and 11 regional aggregates in the baseline are classified into the 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. The lower middle income category excludes India.

Source: OECD/FAO (2021), "OECD-FAO Agricultural Outlook", OECD Agriculture statistics (database), <http://dx.doi.org/10.1787/agr-outl-data-en>.

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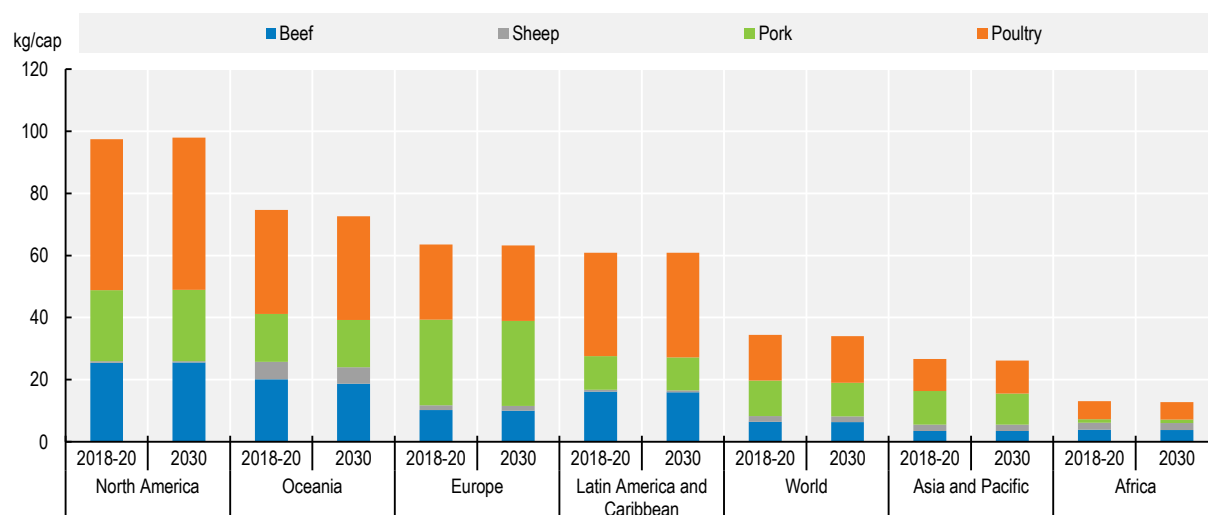
Global pigmeat consumption is projected to increase to 127 Mt over the next ten years and to account for 33% of the total increase in meat consumption. On a per capita basis, pigmeat consumption is expected to marginally increase over the outlook period while its consumption declines in most developed countries. In the European Union, for example, it is projected to decline as changes in the composition of the population influence diets that will favour poultry to pigmeat; the former is not only cheaper, but perceived as a healthier food choice. In developing countries, per capita consumption of pigmeat, which is half that in developed countries, is expected to marginally increase over the projection period. Growth rates are sustained in most of Latin America, where per capita pigmeat consumption has grown rapidly, backed by favourable relative prices that have positioned pork as one of the favoured meats, along with poultry to meet rising demand from the middle class. Several Asian countries, which traditionally consume pork, are projected to increase consumption on a per capita basis once the impact of ASF wanes.

Global per capita beef consumption, which has declined since 2007, is projected to fall by a further 5% by 2030. Asia and the Pacific is the only region where per capita beef consumption is projected to increase over the outlook period, albeit from a low base. In China, the world's second largest consumer of beef in absolute terms, per capita consumption is projected to rise a further 8% by 2030, after having risen 35% in the last decade. But most countries that have high beef per capita consumption will see their level of beef consumption decline in favour of poultry meat. For example, in the Americas, which is where preferences for beef are among the highest in the world, per capita consumption will fall in Argentina (-7%), Brazil (-6%), the United States (-1%), and Canada (-7%). It is also expected to fall significantly in Australia and New Zealand.

Global sheep meat consumption, a niche market in some countries and considered a premium component of diets in many others, is projected to increase to 18 Mt over the outlook period and to account for 6% of the additional meat consumed. Sheep meat consumption worldwide, on a per capita basis, is comparable in both developing and developed countries. In many Near Eastern and North African (NENA) countries,

where sheep meat is traditionally consumed, per capita consumption is projected to continue its long-term decline as that for poultry increases. Demand growth in this region is linked to the oil market, which substantially influences the disposable income of the middle class and government spending patterns.

Figure 6.8. Meat consumption per capita: Continued rise of poultry and fall of beef



Note: Per capita consumption is expressed in retail weight.

Source: OECD/FAO (2021), "OECD-FAO Agricultural Outlook", OECD Agriculture statistics (database), <http://dx.doi.org/10.1787/agr-outl-data-en>.

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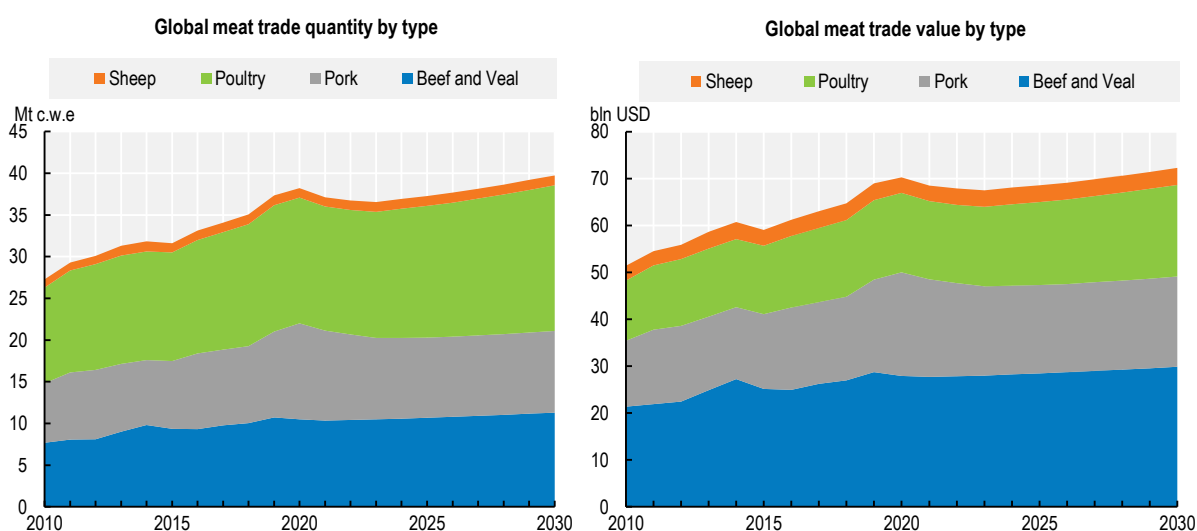
6.6. Trade

Global meat exports are projected to be 8% higher by 2030 than in the base period, reaching 40 Mt. This may appear to be a considerable slow-down in the growth of meat trade compared to the previous decade, but is largely the result of high pigmeat trade during the ASF crisis in Asia, particularly in China. By 2030, the proportion of meat output traded will be stable at around 11%.

Rising imports over the next decade will be comprised mainly of poultry, the largest contributor, and beef. Together, these two meat types are projected to account for most of the additional meat imports into Asia and Africa where consumption growth will outpace the expansion of domestic production.


Meat exports are concentrated, and the combined share of the three largest meat exporting countries – Brazil, the European Union, and the United States – is projected to remain stable and account for around 60% of global world meat exports over the outlook period. In Latin America, traditional exporting countries are expected to retain a high share of the global meat trade, benefiting from the depreciation of their currencies and surplus feed grain production. Brazil, which is the largest exporter of poultry meat, will become the largest beef exporter with a 22% market share. India's exports of beef will plummet by 53% to 0.6 Mt by 2030, given the government reforms concerning animal welfare that are assumed to remain in place over the outlook period; exports fell by 14% in 2020, and are expected to fall a further 26% in 2021 (Figure 6.9). Meat trade in value is dominated by beef and veal, but increasingly dominated by poultry in quantity

Figure 6.9. Meat trade in value is dominated by beef and veal, but increasingly dominated by poultry in quantity



Note: c.w.e. is carcass weight equivalent. Exports measured in constant 2014-16 USD.

Source: OECD/FAO (2021), "OECD-FAO Agricultural Outlook", OECD Agriculture statistics (database), <http://dx.doi.org/10.1787/agr-outl-data-en>.

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Import demand is expected to increase the fastest in terms of volume in Africa, 1.4 Mt or 48% from the base period. The Asian region will account for 52% of global trade by 2030. The greatest increases in imports will occur in the Philippines and Viet Nam, the latter for poultry meat. While Chinese meat imports remain high in the early part of the projection period, a gradual decline is projected in the second half of the projection period as pigmeat production recovers from the ASF outbreak. The increased import demand for pigmeat in China is expected to yield high benefits for Brazil, Canada, the European Union, and the United States. In Russia, the long-term effects of the routinely extended 2014 import ban on meat, which this *Outlook* assumes will be prolonged until the end of 2021, has stimulated domestic production, and meat import levels are expected to continue to decline over the projection period.

Sheep meat exports from Australia and New Zealand have benefitted from the weak NZD and AUD relative to the US dollar, as well as from strong global demand. Shipments to China are projected to remain high as significant growth in Chinese demand for sheep meat is expected for the duration of the ASF outbreak. This contrasts with decreased demand from the United Kingdom and continental Europe in the first half of the outlook period. Imports by the Near East and North Africa region are projected to increase. As a result, Australia is expected to continue to increase its lamb production at the expense of mutton. In New Zealand, export growth is projected to be marginal as land use has shifted from sheep farming to dairy.

6.7. Main issues and uncertainties

Several assumptions drive the results of the analysis of the medium to longer term outlook for meat markets. The first concerns the impact of diseases – human and animal – on meat markets. COVID-19 clearly affected meat markets in 2020 and will have implications for the medium term as the decrease in consumer demand is expected to put downward pressure on agricultural prices and production.³ This *Outlook* assumes that the impacts of COVID-19 on economic growth and on restrictions in the movement of people and goods will be short-lived and that recovery will start in 2021. However, any prolongation of

the pandemic and slower economic recovery may affect supply in terms of logistical issues in processing, transport, and trade. At the same time, the impact of the pandemic on meat demand as countries recover will be important in so far as the extent to which it has affected the restaurant/hotel and tourism sectors.

Animal diseases such as ASF, highly pathogenic avian influenza (HPAI), foot and mouth disease (FMD) always pose significant risks for meat markets. Outbreaks can occur quickly and shock markets, which may take years to recover. This *Outlook* assumes that recovery from ASF in East Asia will be completed by the end of the projection period, but there is risk that this is not the case or that ASF emerges elsewhere.⁴ Investments to restructure and modernise production and processing facilities in the pigmeat sector, the successful development of a vaccine, as well as the implementation of recently developed compartmentalisation guidelines from the World Organisation for Animal Health (OIE),⁵ may have implications for future production and trade. It should be noted that Russia's investments in its pigmeat sector enabled it to nearly double its output over the last decade.

This *Outlook* has long held that existing markets for beef and pigmeat are segmented, i.e. into "Pacific" and "Atlantic" markets. Recent evidence suggests this segmentation is less evident as markets have become increasingly integrated over time. For example, price correlations between the two markets have increased in the last decade. The segmentation of markets was originally caused by the division of countries between those free of FMD and those which were not; as such, trade was partitioned accordingly and countries affected by FMD could not trade with countries free of FMD. However, once the World Organisation for Animal Health (OIE) was able to facilitate the zoning of FMD-free areas within countries without resorting to vaccinations, the trade risk of an FMD outbreak was minimised. This allowed other zones of an FMD-affected country to increase trade in response to market signals (international prices) with countries free of FMD⁶. In time, countries such as Brazil, which was initially pivotal in the "Atlantic" market, were able to develop markets in the "Pacific" zone.

Assumptions regarding productivity improvements and climate change policies will affect Outlook analysis of the meat sectors contribution to climate change. As meat is a significant user of resources – of land, feed and water – lower demand along with productivity improvements imply lower demand for these resources. For example, lower demand and higher productivity for beef implies lower animal inventories and hence fewer feed inputs (meat production in 2018-20 uses around 37% of the calories produced by the crops covered in this *Outlook*).⁷ Lower production would also imply lower GHG emissions from meat production compared to past decades. The role of the meat sector is critical in discussions on climate change, and future policies may have important consequences for production and trade.

Finally, this *Outlook* assumes that consumer preferences will evolve according to historical patterns. As a result, dietary preferences for lower meat consumption (e.g. vegetarian or vegan diets) or for alternative protein sources (e.g. cultured and plant-based protein substitute for meat) are assumed to expand slowly and to be adopted by a small part of population concentrated mainly in high income countries, and therefore hardly affect meat consumption over the next decade. Nevertheless, while the competition from substitutes will increase, consumer choice will continue to be influenced by the nutritional content in meat as compared to protein substitutes.

Consumers are also expressing concerns about meat production systems, including traceability and the use of antimicrobials in feeds. While the technical benefits of antimicrobial use in animal production are well documented, there is a growing preference for antimicrobial-free meat due to the global risks associated with antimicrobial resistance.⁸ If antimicrobial-free meat production systems are adopted by an increasing share of producers, this may affect global meat markets, albeit in the longer term. The extent to which consumers are willing to pay a premium for such meat remains unclear.

Nevertheless, as consumer preferences for such diets increase more quickly than in past years, meat demand may contract, reducing in turn meat production and import demand.

Notes

¹ Unless otherwise specified, % changes refer to the change from the average base period 2018/20 and 2030.

² Dasgupta, P. (2021), *The Economics of Biodiversity: The Dasgupta Review*, Abridged Version, HM Treasury, London, p.1.

³ OECD (2020), "The impact of COVID-19 on agricultural markets and GHG emissions", *OECD Policy Responses to Coronavirus (COVID-19)*, OECD Publishing, Paris, <https://doi.org/10.1787/57e5eb53-en>.

⁴ Frezal, C., S. 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>.

⁵ OIE (2020), *Compartmentalization Guidelines: African Swine Fever*, Paris.

⁶ Holst, Carsten and von Cramon-Taubadel (2012), "International Synchronisation of the Pork Cycle," *Acta Oeconomica et Informatica*, Faculty of Economics and Management, Slovak Agricultural University in Nitra (FEM SPU), Vol. 15(1), pp. 1-6, March.

⁷ For more analysis see OECD/FAO (2020), *OECD-FAO Agricultural Outlook 2020-2029*, OECD Publishing, Paris/FAO, Paris, <https://doi.org/10.1787/1112c23b-en>.

⁸ Ryan, M. (2019), "Evaluating the economic benefits and costs of antimicrobial use in food-producing animals", *OECD Food, Agriculture and Fisheries Papers*, No. 132, OECD Publishing, Paris, <https://doi.org/10.1787/f859f644-en>.

Table C.4. World meat projections

Calendar year

		Average 2018-20est	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
WORLD												
BEEF AND VEAL												
Production	kt cwe	70 607	70 368	70 707	71 234	71 893	72 417	72 838	73 243	73 761	74 254	74 713
Consumption	kt cwe	70 281	70 117	70 430	70 948	71 615	72 134	72 556	72 959	73 475	73 968	74 421
PIGMEAT												
Production	kt cwe	112 928	112 861	117 799	122 346	122 986	123 627	124 421	125 106	125 833	126 543	127 278
Consumption	kt cwe	112 293	112 597	117 546	122 105	122 730	123 373	124 167	124 852	125 579	126 288	127 027
POULTRY MEAT												
Production	kt rtc	130 629	135 071	137 280	138 413	140 621	142 773	144 858	146 980	149 124	151 307	153 479
Consumption	kt rtc	128 912	133 346	135 624	136 765	138 964	141 117	143 219	145 339	147 473	149 665	151 831
SHEEP MEAT												
Production	kt cwe	15 862	16 166	16 312	16 623	16 874	17 129	17 379	17 630	17 878	18 121	18 359
Consumption	kt cwe	15 901	16 196	16 357	16 659	16 910	17 165	17 416	17 666	17 915	18 157	18 395
TOTAL MEAT												
Per capita consumption ¹	kg rwt	42.7	42.4	43.0	43.4	43.4	43.5	43.5	43.5	43.6	43.6	43.7
DEVELOPED COUNTRIES												
BEEF AND VEAL												
Production	kt cwe	30 951	30 613	30 811	30 987	31 162	31 224	31 333	31 415	31 545	31 661	31 770
Consumption	kt cwe	29 992	29 567	29 662	29 799	29 917	29 965	30 043	30 094	30 203	30 297	30 376
PIGMEAT												
Production	kt cwe	46 305	46 865	46 664	46 352	46 281	46 202	46 288	46 266	46 288	46 302	46 322
Consumption	kt cwe	41 100	41 293	41 494	41 711	41 728	41 747	41 884	41 866	41 894	41 902	41 912
POULTRY MEAT												
Production	kt rtc	51 622	52 888	53 368	53 784	54 361	54 897	55 363	55 850	56 356	56 890	57 423
Consumption	kt rtc	48 558	49 546	50 085	50 575	51 039	51 481	51 882	52 301	52 723	53 185	53 624
SHEEP MEAT												
Production	kt cwe	3 479	3 420	3 463	3 521	3 546	3 568	3 589	3 610	3 636	3 662	3 688
Consumption	kt cwe	2 720	2 676	2 699	2 740	2 761	2 783	2 804	2 825	2 849	2 872	2 894
TOTAL MEAT												
Per capita consumption ¹	kg rwt	85.7	85.6	86.0	86.4	86.6	86.8	87.1	87.2	87.5	87.7	88.0
DEVELOPING COUNTRIES												
BEEF AND VEAL												
Production	kt cwe	39 656	39 755	39 896	40 246	40 731	41 193	41 505	41 828	42 216	42 592	42 943
Consumption	kt cwe	40 289	40 550	40 768	41 149	41 698	42 169	42 514	42 865	43 271	43 670	44 045
PIGMEAT												
Production	kt cwe	66 624	65 996	71 135	75 994	76 705	77 425	78 133	78 840	79 545	80 241	80 956
Consumption	kt cwe	71 193	71 303	76 052	80 394	81 002	81 626	82 284	82 986	83 685	84 386	85 116
POULTRY MEAT												
Production	kt rtc	79 006	82 183	83 912	84 629	86 260	87 875	89 495	91 130	92 769	94 417	96 056
Consumption	kt rtc	80 354	83 799	85 539	86 190	87 925	89 635	91 337	93 038	94 750	96 479	98 207
SHEEP MEAT												
Production	kt cwe	12 383	12 747	12 850	13 102	13 328	13 561	13 790	14 020	14 242	14 459	14 671
Consumption	kt cwe	13 181	13 520	13 658	13 918	14 149	14 382	14 612	14 841	15 066	15 285	15 501
TOTAL MEAT												
Per capita consumption ¹	kg rwt	32.8	32.7	33.4	33.9	34.0	34.1	34.1	34.2	34.3	34.4	34.5
OECD²												
BEEF AND VEAL												
Production	kt cwe	29 768	29 599	29 770	29 937	30 114	30 165	30 272	30 347	30 473	30 581	30 684
Consumption	kt cwe	29 015	28 776	28 894	29 038	29 171	29 220	29 309	29 364	29 476	29 571	29 657
PIGMEAT												
Production	kt cwe	44 351	44 808	44 623	44 318	44 287	44 238	44 343	44 347	44 398	44 444	44 494
Consumption	kt cwe	40 307	40 369	40 609	40 878	40 949	40 989	41 145	41 152	41 205	41 242	41 278
POULTRY MEAT												
Production	kt rtc	52 065	53 175	53 623	54 053	54 654	55 216	55 716	56 248	56 802	57 387	57 970
Consumption	kt rtc	48 800	49 773	50 376	50 915	51 403	51 875	52 309	52 765	53 224	53 723	54 199
SHEEP MEAT												
Production	kt cwe	2 827	2 772	2 810	2 844	2 853	2 858	2 863	2 867	2 877	2 888	2 898
Consumption	kt cwe	2 121	2 081	2 097	2 115	2 119	2 123	2 128	2 132	2 139	2 146	2 153
TOTAL MEAT												
Per capita consumption ¹	kg rwt	86.5	86.4	86.8	87.2	87.5	87.6	87.9	88.0	88.2	88.4	88.6

Note: Calendar Year; except year ending 30 September for New Zealand in aggregates. Average 2018-20est: Data for 2020 are estimated. Prices are in nominal terms.

1. Per capita consumption expressed in retail weight. Carcass weight to retail weight conversion factors of 0.7 for beef and veal, 0.78 for pigmeat and 0.88 for both sheep meat and poultry meat.
2. Excludes Iceland and Costa Rica but includes all EU member countries.

Source: OECD/FAO (2021), "OECD-FAO Agricultural Outlook", OECD Agriculture statistics (database). dx.doi.org/10.1787/agr-outl-data-en

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 2018-20est	2030	2011-20	2021-30	Average 2018-20est	2030	2011-20	2021-30	Average 2018-20est	2030	2011-20	2021-30
WORLD	330 027	373 830	1.42	1.16	34 450	38 015	3.20	0.95	36 876	39 751	2.91	0.88
NORTH AMERICA	51 543	56 085	1.73	0.73	2 700	2 889	2.89	0.84	10 012	10 738	1.64	0.40
Canada	5 037	5 568	1.45	0.83	652	725	-0.66	0.58	2 098	2 344	2.21	0.62
United States	46 506	50 517	1.76	0.72	2 048	2 165	4.28	0.93	7 914	8 393	1.50	0.34
LATIN AMERICA	54 202	61 837	1.69	1.21	4 711	5 451	4.21	1.48	9 564	11 834	3.70	2.21
Argentina	6 001	6 760	2.73	1.07	50	37	-1.83	1.06	937	1 245	9.54	1.70
Brazil	27 280	30 502	1.20	0.97	52	56	0.69	-0.20	6 597	8 297	2.63	2.77
Chile	1 559	1 866	1.16	1.49	584	598	10.32	0.18	438	562	5.89	0.91
Colombia	2 890	3 273	3.42	1.53	235	448	12.73	7.01	32	3	8.07	-19.02
Mexico	7 163	8 431	2.63	1.44	2 147	2 186	4.56	0.09	475	459	9.98	-1.47
Paraguay	600	767	5.77	2.60	39	43	3.93	1.79	352	490	5.94	3.15
Peru	2 143	2 916	4.78	2.88	97	93	14.34	-0.12	2	0	-22.57	..
EUROPE	63 675	63 776	1.70	-0.03	5 052	5 148	-3.79	0.82	9 311	9 314	4.53	0.22
European Union ¹	44 301	43 179	1.19	-0.20	1 502	1 640	-0.91	1.38	7 028	6 967	3.82	0.41
United Kingdom	3 952	3 831	1.69	-0.61	1 787	2 093	1.05	1.94	870	695	2.04	-2.07
Russia	10 377	11 146	4.63	0.48	748	425	-15.06	-4.16	438	527	32.12	1.00
Ukraine	2 234	2 696	1.05	1.19	414	324	0.54	-0.61	445	550	20.06	0.71
AFRICA	18 194	22 851	2.42	2.20	2 925	4 321	3.13	5.19	326	212	2.32	-3.37
Egypt	2 255	3 021	2.36	2.95	352	411	7.46	4.26	5	4	3.95	-0.67
Ethiopia	691	864	1.64	2.55	1	2	14.60	7.44	16	14	-0.32	1.88
Nigeria	1 231	1 283	1.61	0.67	17	35	13.35	14.97	0	0	..	..
South Africa	3 340	4 291	2.44	2.23	585	569	3.01	1.37	146	120	0.48	-2.18
ASIA	135 879	162 053	0.96	1.66	18 630	19 699	5.76	0.11	4 867	4 522	2.99	0.19
China ²	79 320	94 975	-0.35	1.42	5 497	4 503	21.08	-4.66	573	570	-3.01	1.42
India	7 656	8 117	2.50	2.26	2	28	0.00	42.63	1 387	644	-0.47	-3.28
Indonesia	4 150	4 670	6.90	2.29	230	238	18.08	0.53	3	1	-6.83	-7.19
Iran	2 963	3 450	1.49	1.71	130	122	-8.09	8.72	59	21	-2.19	-4.16
Japan	3 392	3 322	0.77	-0.31	3 157	3 137	2.72	-0.08	18	21	11.21	0.58
Kazakhstan	953	1 091	3.33	1.05	293	383	0.46	2.15	23	23	32.87	-1.21
Korea	2 562	2 653	3.29	0.19	1 433	1 598	4.58	1.11	54	51	4.44	-1.04
Malaysia	2 099	2 560	2.89	1.94	335	501	3.94	3.95	215	115	6.00	-5.96
Pakistan	4 461	6 152	6.42	3.17	2	2	-10.25	2.61	75	27	4.60	-11.92
Philippines	3 397	3 378	1.25	2.03	608	1 259	8.91	7.11	6	6	-12.50	-0.91
Saudi Arabia	859	1 320	6.79	2.47	801	673	-3.68	0.36	60	56	-1.06	-0.25
Thailand	3 064	3 586	1.22	1.46	27	32	-6.67	-0.05	1 268	1 626	6.59	2.44
Turkey	3 743	4 646	4.68	1.75	93	78	-2.87	0.02	665	962	8.85	2.73
Viet Nam	4 909	6 831	2.28	3.10	868	808	-3.25	7.81	75	104	19.33	-4.08
OCEANIA	6 532	7 228	0.98	1.29	432	507	3.43	2.08	2 796	3 132	0.22	1.36
Australia	4 949	5 641	0.84	1.62	224	253	1.82	1.45	1 711	2 090	-0.92	2.26
New Zealand	1 433	1 408	1.37	0.00	83	100	6.18	1.99	1 082	1 040	2.20	-0.24
DEVELOPED COUNTRIES	132 357	139 204	1.70	0.45	12 578	13 152	-0.34	0.74	22 350	23 367	2.60	0.42
DEVELOPING COUNTRIES	197 669	234 625	1.23	1.61	21 872	24 863	5.78	1.07	14 526	16 385	3.42	1.58
LEAST DEVELOPED COUNTRIES (LDC)	11 876	15 677	3.56	2.69	1 216	2 175	3.03	7.70	82	30	13.25	-6.35
OECD³	129 011	136 046	1.64	0.48	14 204	15 369	2.79	0.92	22 426	23 607	2.50	0.47
BRICS	127 973	149 031	0.55	1.31	6 885	5 580	6.78	-4.06	9 141	10 157	2.20	2.01

.. Not available

Note: Calendar year; except year ending 30 September for New Zealand. Average 2018-20est: Data for 2020 are estimated.

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

Source: OECD/FAO (2021), "OECD-FAO Agricultural Outlook", OECD Agriculture statistics (database). dx.doi.org/10.1787/agr-outl-data-en

ANNEX C

Table C.25.2. Meat projections: Consumption, food

Calendar year

	CONSUMPTION (kt cwe)		Growth (%) ⁴		FOOD (kg rwe/cap) ⁵		Growth (%) ⁴	
	Average 2018-20est	2030	2011-20	2021-30	Average 2018-20est	2030	2011-20	2021-30
WORLD	327 387	371 675	1.43	1.17	42.7	43.7	0.29	0.25
NORTH AMERICA	44 548	48 602	1.80	0.83	121.6	124.5	1.09	0.25
Canada	3 301	3 653	1.41	0.94	88.2	89.4	0.42	0.16
United States	41 247	44 949	1.83	0.82	125.3	128.6	1.15	0.27
LATIN AMERICA	48 808	54 852	1.54	1.04	75.5	77.9	0.54	0.28
Argentina	5 114	5 552	1.72	0.93	114.2	113.2	0.71	0.12
Brazil	20 549	22 117	0.84	0.38	97.4	98.8	0.02	-0.12
Chile	1 688	1 880	2.35	1.24	89.2	96.6	1.12	1.12
Colombia	3 049	3 657	3.89	2.16	60.6	68.5	2.61	1.70
Mexico	8 605	9 850	3.03	1.25	67.5	69.9	1.80	0.37
Paraguay	283	316	5.76	1.74	40.2	39.8	4.37	0.65
Peru	2 238	3 008	5.15	2.78	68.9	83.5	3.72	1.91
EUROPE	59 201	59 437	0.68	0.01	79.2	80.1	0.53	0.11
European Union ¹	38 442	37 630	0.64	-0.21	86.4	85.2	0.51	-0.13
United Kingdom	4 871	5 229	1.40	0.57	72.1	74.2	0.74	0.20
Russia	10 784	11 074	0.91	0.20	73.9	77.3	0.72	0.40
Ukraine	2 198	2 467	-1.07	1.04	50.0	60.3	-0.61	1.73
AFRICA	20 850	27 025	2.55	2.70	16.1	16.2	-0.05	0.37
Egypt	2 640	3 457	2.95	3.08	26.3	28.6	0.78	1.41
Ethiopia	653	847	1.87	2.88	5.8	5.8	-0.85	0.54
Nigeria	1 303	1 440	1.54	1.41	6.5	5.5	-1.09	-1.02
South Africa	3 742	4 659	2.33	2.31	63.9	70.6	0.84	1.25
ASIA	150 147	177 521	1.44	1.50	32.8	35.9	0.46	0.81
China ²	84 241	98 833	0.45	1.04	58.8	67.5	-0.05	0.88
India	6 259	7 489	3.29	2.97	4.6	5.0	2.16	2.10
Indonesia	4 502	5 051	7.33	2.16	16.6	16.9	6.03	1.26
Iran	3 020	3 545	1.28	1.95	36.4	38.3	-0.05	0.99
Japan	6 531	6 443	1.69	-0.20	51.5	53.4	1.87	0.28
Kazakhstan	1 225	1 455	2.37	1.37	66.0	70.5	0.90	0.44
Korea	3 888	4 200	3.58	0.49	75.9	82.1	3.24	0.52
Malaysia	2 237	2 966	2.67	2.73	70.0	82.2	1.30	1.63
Pakistan	4 380	6 117	6.43	3.33	20.2	23.3	4.25	1.56
Philippines	4 005	4 638	2.27	3.19	37.1	37.5	0.72	1.96
Saudi Arabia	1 746	2 098	0.90	1.66	51.0	53.4	-1.40	0.46
Thailand	1 628	1 614	-1.82	0.21	23.4	22.9	-2.19	0.15
Turkey	3 246	3 777	3.35	1.46	38.9	42.4	1.74	0.94
Viet Nam	5 736	7 551	1.24	3.66	59.5	72.5	0.21	2.98
OCEANIA	3 832	4 238	1.98	1.24	92.9	90.2	0.51	0.08
Australia	3 129	3 448	1.92	1.19	124.2	122.4	0.54	0.20
New Zealand	431	459	1.70	0.66	90.2	88.7	0.71	-0.04
DEVELOPED COUNTRIES	122 370	128 806	1.28	0.49	85.7	88.0	0.85	0.29
DEVELOPING COUNTRIES	205 017	242 869	1.53	1.55	32.8	34.5	0.21	0.47
LEAST DEVELOPED COUNTRIES (LDC)	13 006	17 786	3.60	3.18	15.0	16.1	1.22	0.97
OECD³	120 243	127 287	1.61	0.54	86.5	88.6	1.05	0.27
BRICS	125 574	144 171	0.73	0.99	39.1	42.4	-0.04	0.51

Note: Calendar year; except year ending 30 September New Zealand. Average 2018-20est: Data for 2020 are estimated.

1. Refers to all current European Union member States (excludes the United Kingdom)
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 retail weight. Carcass weight to retail weight conversion factors of 0.7 for beef and veal, 0.78 for pigmeat and 0.88 for both sheep meat and poultry meat.

Source: OECD/FAO (2021), "OECD-FAO Agricultural Outlook", OECD Agriculture statistics (database). dx.doi.org/10.1787/agr-outl-data-en

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 2018-20est	2030	2011-20	2021-30	Average 2018-20est	2030	2011-20	2021-30	Average 2018-20est	2030	2011-20	2021-30
WORLD	70 607	74 713	0.95	0.68	10 260	11 191	4.38	0.96	10 410	11 283	2.96	0.99
NORTH AMERICA	13 363	14 172	0.93	0.57	1 633	1 673	3.64	0.52	1 955	2 286	3.33	1.08
Canada	1 472	1 603	1.20	0.63	199	213	-3.71	0.64	532	692	5.56	1.87
United States	11 891	12 569	0.90	0.57	1 434	1 460	5.10	0.50	1 424	1 594	2.59	0.76
LATIN AMERICA	18 407	19 718	1.05	0.65	790	817	1.10	-0.01	3 727	4 832	7.02	1.84
Argentina	3 165	3 415	2.69	0.80	7	7	3.10	0.00	671	862	17.37	1.07
Brazil	9 192	9 819	0.41	0.45	42	50	0.18	0.00	1 806	2 534	6.05	2.31
Chile	228	271	1.61	0.81	319	359	7.99	0.98	21	25	14.11	-0.97
Colombia	807	737	-1.27	-0.26	7	5	13.47	-5.51	30	2	14.21	-21.33
Mexico	1 992	2 230	1.35	1.11	139	123	-1.90	-0.37	223	250	7.71	1.06
Paraguay	488	632	4.98	2.79	9	5	14.20	-3.16	340	479	5.52	3.26
Peru	192	215	0.44	1.14	9	12	6.92	3.75	0	0	..	..
EUROPE	10 784	10 197	0.25	-0.40	1 289	1 258	-3.35	0.67	1 071	1 083	2.58	0.72
European Union ¹	7 208	6 689	0.43	-0.50	368	389	0.99	1.51	585	653	2.40	1.64
United Kingdom	890	736	0.01	-1.88	356	472	2.09	3.28	151	79	0.11	-3.32
Russia	1 624	1 722	0.04	0.50	411	252	-10.31	-3.52	53	65	12.89	0.00
Ukraine	365	325	-1.54	-0.39	5	10	-5.20	2.27	43	15	12.56	-2.94
AFRICA	6 575	7 497	1.23	1.35	565	822	3.93	4.70	94	49	0.46	-5.81
Egypt	715	711	-1.83	0.20	306	364	14.53	4.20	1	1	14.49	-0.34
Ethiopia	416	480	0.73	1.90	0	0	..	..	3	0	23.43	..
Nigeria	281	281	-0.67	-0.70	1	2	-4.46	2.78	0	0	..	..
South Africa	1 043	1 182	2.52	1.59	15	4	-16.11	1.15	55	40	5.55	-4.10
ASIA	18 228	19 566	1.36	1.02	5 949	6 588	7.93	0.86	1 780	983	0.50	-2.85
China ²	6 594	7 127	1.07	0.58	1 526	1 849	49.23	-0.28	61	59	-4.88	0.34
India	2 410	1 610	-1.08	-1.19	0	0	..	..	1 367	642	-0.43	-3.21
Indonesia	377	392	-2.28	0.84	225	227	18.69	0.25	0	0	-7.01	..
Iran	381	310	0.21	-0.57	108	121	-5.28	8.80	4	3	11.83	-1.39
Japan	473	410	-1.05	-1.39	888	920	2.61	0.36	5	5	25.97	0.00
Kazakhstan	490	528	3.49	0.61	59	73	-0.02	1.19	9	11	44.80	-0.36
Korea	285	309	-1.20	0.54	542	608	6.40	0.68	4	4	-1.01	0.00
Malaysia	31	32	2.68	0.55	197	281	2.18	3.37	9	6	-1.24	-3.26
Pakistan	2 207	2 944	4.76	3.19	1	1	-11.05	..	61	11	8.59	-17.92
Philippines	292	256	-0.56	0.70	164	234	5.22	2.46	3	3	-3.83	-0.41
Saudi Arabia	42	62	-1.06	3.80	157	183	-0.08	1.26	13	10	-9.96	-1.25
Thailand	188	175	-2.62	0.46	21	26	-5.86	-0.30	44	45	-1.72	0.30
Turkey	986	1 285	6.15	1.83	26	11	-11.45	-1.82	23	36	3.33	1.70
Viet Nam	411	532	1.46	1.76	563	348	-1.54	4.54	2	2	37.68	-0.50
OCEANIA	3 249	3 563	0.22	1.35	32	34	-0.08	0.87	1 782	2 051	-0.91	1.60
Australia	2 549	2 894	-0.13	1.76	10	8	-3.78	-0.28	1 157	1 453	-2.67	2.55
New Zealand	689	661	1.51	-0.28	10	10	3.52	0.00	623	596	3.00	-0.37
DEVELOPED COUNTRIES	30 951	31 770	0.76	0.39	4 092	4 210	0.62	0.59	4 879	5 479	1.51	1.15
DEVELOPING COUNTRIES	39 656	42 943	1.11	0.90	6 168	6 981	7.74	1.18	5 531	5 804	4.44	0.84
LEAST DEVELOPED COUNTRIES (LDC)	4 002	4 925	1.94	1.93	109	217	1.40	4.69	15	7	8.87	-7.50
OECD³	29 768	30 684	0.74	0.38	4 475	4 823	3.19	0.94	4 780	5 393	1.56	1.21
BRICS	20 863	21 459	0.51	0.42	1 994	2 155	8.61	-0.71	3 342	3 340	2.82	0.81

.. Not available

Note: Calendar year; except year ending 30 September for New Zealand. Average 2018-20est: Data for 2020 are estimated.

1. Refers to all current European Union member States (excludes the United Kingdom)
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 (2021), "OECD-FAO Agricultural Outlook", OECD Agriculture statistics (database). dx.doi.org/10.1787/agr-outl-data-en

ANNEX C

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 2018-20est	2030	2011-20	2021-30	Average 2018-20est	2030	2011-20	2021-30
WORLD	70 281	74 421	1.06	0.68	6.4	6.1	-0.08	-0.23
NORTH AMERICA	13 312	13 920	0.81	0.51	25.4	25.0	0.11	-0.06
Canada	965	977	-0.36	0.03	18.1	16.7	-1.34	-0.75
United States	12 347	12 943	0.91	0.55	26.3	25.9	0.24	0.00
LATIN AMERICA	14 919	15 090	-0.12	0.25	16.2	15.0	-1.11	-0.51
Argentina	2 501	2 560	0.50	0.71	39.1	36.5	-0.50	-0.10
Brazil	7 243	7 190	-0.52	-0.11	24.0	22.5	-1.33	-0.61
Chile	510	584	4.36	1.03	18.9	21.0	3.12	0.91
Colombia	741	680	-1.76	-0.08	10.3	8.9	-2.98	-0.53
Mexico	1 666	1 784	1.38	0.82	9.1	8.9	0.17	-0.05
Paraguay	153	155	5.30	1.32	15.2	13.6	3.91	0.24
Peru	201	227	0.68	1.24	4.3	4.4	-0.69	0.38
EUROPE	10 867	10 242	-0.72	-0.36	10.2	9.7	-0.87	-0.26
European Union ¹	6 759	6 267	0.14	-0.50	10.6	9.9	0.01	-0.41
United Kingdom	1 097	1 129	0.68	0.11	11.4	11.2	0.03	-0.26
Russia	2 083	1 941	-3.64	-0.30	10.0	9.5	-3.81	-0.10
Ukraine	319	315	-2.93	-0.19	5.1	5.4	-2.48	0.49
AFRICA	7 167	8 477	1.45	1.84	3.9	3.5	-1.11	-0.47
Egypt	1 058	1 103	1.04	1.36	7.4	6.4	-1.09	-0.28
Ethiopia	391	477	0.87	2.44	2.4	2.3	-1.83	0.11
Nigeria	332	398	-0.64	1.55	1.2	1.1	-3.21	-0.89
South Africa	960	1 064	0.80	2.04	11.5	11.3	-0.67	0.98
ASIA	22 833	25 490	2.90	1.12	3.5	3.6	1.91	0.43
China ²	8 138	8 941	3.93	0.33	4.0	4.3	3.41	0.18
India	1 043	968	-1.47	0.44	0.5	0.5	-2.55	-0.41
Indonesia	743	769	2.94	0.52	1.9	1.8	1.69	-0.36
Iran	488	429	-0.72	1.33	4.1	3.2	-2.02	0.37
Japan	1 343	1 330	1.22	-0.21	7.4	7.7	1.40	0.26
Kazakhstan	543	593	2.87	0.70	20.5	20.1	1.38	-0.22
Korea	821	913	3.36	0.64	11.2	12.5	3.03	0.67
Malaysia	234	323	1.51	3.04	5.1	6.3	0.15	1.95
Pakistan	2 138	2 924	4.65	3.48	6.9	7.8	2.50	1.72
Philippines	461	494	1.63	1.49	3.0	2.8	0.10	0.28
Saudi Arabia	187	236	0.71	1.99	3.8	4.2	-1.58	0.79
Thailand	119	118	-4.07	0.37	1.2	1.2	-4.43	0.31
Turkey	1 065	1 274	4.18	1.74	8.9	10.0	2.55	1.22
Viet Nam	1 005	891	0.66	2.73	7.3	6.0	-0.36	2.05
OCEANIA	1 183	1 202	1.66	0.63	20.1	17.9	0.19	-0.53
Australia	1 085	1 116	2.22	0.76	30.1	27.7	0.83	-0.23
New Zealand	77	64	-4.19	-1.63	11.2	8.6	-5.11	-2.31
DEVELOPED COUNTRIES	29 992	30 376	0.44	0.29	14.7	14.5	0.01	0.09
DEVELOPING COUNTRIES	40 289	44 045	1.54	0.95	4.5	4.4	0.23	-0.11
LEAST DEVELOPED COUNTRIES (LDC)	4 154	5 236	2.19	2.06	3.3	3.3	-0.16	-0.12
OECD³	29 015	29 657	0.90	0.32	14.6	14.5	0.33	0.05
BRICS	19 466	20 104	0.74	0.20	4.2	4.1	-0.04	-0.28

Note: Calendar year; except year ending 30 September New Zealand. Average 2018-20est: Data for 2020 are estimated.

1. Refers to all current European Union member States (excludes the United Kingdom)
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 retail weight. Carcass weight to retail weight conversion factors of 0.7 for beef and veal, 0.78 for pigmeat and 0.88 for both sheep meat and poultry meat.

Source: OECD/FAO (2021), "OECD-FAO Agricultural Outlook", OECD Agriculture statistics (database). dx.doi.org/10.1787/agr-outl-data-en

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 2018-20est	2030	2011-20	2021-30	Average 2018-20est	2030	2011-20	2021-30	Average 2018-20est	2030	2011-20	2021-30
WORLD	112 928	127 278	-0.01	1.09	9 855	9 866	4.53	-0.66	10 346	9 813	3.66	-0.77
NORTH AMERICA	14 415	15 271	2.40	0.26	694	829	2.12	1.67	4 379	4 261	2.98	-1.08
Canada	2 110	2 281	1.09	0.48	255	291	2.11	0.26	1 429	1 499	2.17	0.04
United States	12 304	12 990	2.64	0.22	438	538	2.10	2.51	2 950	2 762	3.40	-1.65
LATIN AMERICA	8 527	9 620	2.85	1.05	1 629	1 721	8.11	0.54	1 242	1 175	7.32	-0.96
Argentina	619	725	8.74	0.99	33	25	1.34	1.62	31	36	24.80	-0.47
Brazil	4 065	4 312	2.46	0.45	4	1	6.32	-5.96	696	579	6.21	-1.03
Chile	546	658	-0.14	1.67	124	121	24.85	-1.59	236	330	6.00	1.61
Colombia	416	517	8.66	1.81	119	133	17.90	2.61	1	0	..	..
Mexico	1 582	1 908	3.60	1.60	1 003	1 025	7.57	0.26	247	200	13.21	-4.13
Paraguay	59	66	8.65	1.37	4	4	4.62	-0.94	6	7	33.88	1.21
Peru	170	205	4.73	1.94	11	12	10.09	7.18	0	0	..	..
EUROPE	29 713	28 874	1.20	-0.30	1 242	1 339	-7.86	1.50	4 449	4 038	3.88	-0.43
European Union ¹	23 000	21 746	0.58	-0.45	159	172	0.33	1.28	4 005	3 647	3.97	-0.33
United Kingdom	912	917	2.33	-0.40	765	816	0.33	0.99	265	234	4.59	-1.53
Russia	3 955	4 350	6.37	0.40	90	51	-29.27	3.85	106	100	65.82	0.00
Ukraine	708	818	0.20	1.22	35	38	-20.54	0.57	4	5	-19.87	-0.07
AFRICA	1 632	1 890	4.05	1.48	283	567	4.06	8.28	29	20	0.50	-1.41
Egypt	1	1	4.22	-2.00	2	3	30.07	3.33	0	0	..	..
Ethiopia	2	3	1.74	2.72	0	0	..	..	0	0	..	..
Nigeria	289	304	2.18	1.51	3	5	26.90	2.38	0	0	..	..
South Africa	278	322	3.89	1.53	35	33	-2.97	1.50	25	17	0.44	-1.48
ASIA	58 087	71 035	-1.58	1.91	5 713	5 066	9.35	-2.55	209	277	-2.65	-0.16
China ²	45 898	57 295	-2.26	1.96	2 659	1 505	22.44	-8.66	82	54	-9.57	-0.50
India	364	381	0.26	0.85	1	25	-0.74	57.26	1	0	..	..
Indonesia	232	229	-1.45	0.37	2	8	7.35	11.85	0	0	..	..
Iran	0	0	..	..	0	0	..	..	0	0	..	..
Japan	1 283	1 248	-0.03	-0.31	1 336	1 318	2.74	-0.19	2	4	11.20	3.57
Kazakhstan	87	74	-2.61	-1.89	33	61	-3.40	4.54	1	1	24.00	-0.95
Korea	1 363	1 356	4.17	-0.18	679	773	3.34	1.83	2	3	6.54	0.00
Malaysia	223	228	0.26	0.70	27	30	7.42	1.21	5	4	-2.30	-0.77
Pakistan	0	0	..	..	0	0	..	..	0	0	..	..
Philippines	1 671	1 483	-0.32	2.19	128	293	3.15	7.13	2	2	-3.64	-1.62
Saudi Arabia	0	0	..	..	19	16	13.75	0.00	3	1	32.95	0.00
Thailand	1 110	1 344	0.86	1.13	1	2	-13.35	1.28	39	94	4.89	4.78
Turkey	0	0	..	..	16	19	2.23	-0.01	16	19	2.23	0.01
Viet Nam	3 424	4 665	1.01	3.21	129	238	56.30	17.16	40	75	9.54	-4.18
OCEANIA	555	589	1.65	0.91	295	344	3.39	1.84	39	42	0.77	1.37
Australia	411	428	2.17	0.73	214	245	2.14	1.51	37	41	0.37	1.43
New Zealand	46	45	-1.00	-0.33	69	86	6.97	2.37	1	1	..	0.02
DEVELOPED COUNTRIES	46 305	46 322	1.53	-0.10	3 663	3 958	-2.21	1.00	8 898	8 365	3.41	-0.76
DEVELOPING COUNTRIES	66 624	80 956	-1.00	1.84	6 193	5 908	11.01	-1.65	1 448	1 448	5.26	-0.82
LEAST DEVELOPED COUNTRIES (LDC)	2 357	2 999	6.31	2.69	158	413	6.64	11.56	0	0	-12.01	..
OECD³	44 351	44 494	1.41	-0.05	5 194	5 557	3.48	0.78	9 195	8 747	3.71	-0.76
BRICS	54 559	66 659	-1.42	1.74	2 789	1 616	8.07	-8.15	909	749	5.02	-0.89

.. Not available

Note: Calendar year; except year ending 30 September New Zealand. Average 2018-20est: Data for 2020 are estimated.

1. Refers to all current European Union member States (excludes the United Kingdom)
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 (2021), "OECD-FAO Agricultural Outlook", OECD Agriculture statistics (database). dx.doi.org/10.1787/agr-outl-data-en

ANNEX C

Table C.27.2. Pigmeat projections: Consumption, food

Calendar year

	CONSUMPTION (kt cwe)		Growth (%) ⁴		FOOD (kg rwe/cap) ⁵		Growth (%) ⁴	
	Average 2018-20est	2030	2011-20	2021-30	Average 2018-20est	2030	2011-20	2021-30
WORLD	112 293	127 027	0.05	1.09	11.4	11.7	-1.08	0.17
NORTH AMERICA	10 766	11 834	2.24	0.90	22.9	23.6	1.52	0.33
Canada	822	909	1.12	1.01	17.1	17.4	0.13	0.22
United States	9 945	10 925	2.33	0.89	23.6	24.4	1.65	0.34
LATIN AMERICA	8 919	10 171	3.08	1.21	10.8	11.3	2.06	0.45
Argentina	622	714	7.51	1.09	10.8	11.4	6.44	0.27
Brazil	3 372	3 734	1.77	0.71	12.5	13.0	0.94	0.21
Chile	434	449	0.40	0.72	17.9	18.0	-0.80	0.60
Colombia	534	651	10.08	1.96	8.3	9.5	8.72	1.50
Mexico	2 343	2 737	4.33	1.61	14.3	15.2	3.08	0.73
Paraguay	56	63	7.43	1.22	6.2	6.2	6.02	0.14
Peru	181	217	5.05	2.15	4.3	4.7	3.62	1.28
EUROPE	26 495	26 178	0.18	-0.19	27.6	27.5	0.03	-0.09
European Union ¹	19 115	18 246	-0.03	-0.46	33.5	32.2	-0.16	-0.38
United Kingdom	1 411	1 499	0.85	0.53	16.3	16.6	0.20	0.17
Russia	3 939	4 300	1.64	0.45	21.1	23.4	1.45	0.65
Ukraine	743	854	-2.09	1.19	13.2	16.3	-1.63	1.88
AFRICA	1 887	2 437	4.12	2.74	1.1	1.1	1.49	0.41
Egypt	3	4	20.96	2.34	0.0	0.0	18.41	0.68
Ethiopia	2	3	1.19	3.80	0.0	0.0	-1.52	1.44
Nigeria	293	310	2.34	1.52	1.1	0.9	-0.31	-0.91
South Africa	287	338	3.31	1.71	3.8	4.0	1.81	0.65
ASIA	63 413	75 517	-0.85	1.53	10.8	11.9	-1.80	0.85
China ²	48 393	58 649	-1.51	1.49	26.3	31.2	-2.00	1.34
India	364	406	0.23	1.56	0.2	0.2	-0.86	0.70
Indonesia	220	230	-1.26	0.93	0.6	0.6	-2.46	0.05
Iran	0	0	..	..	0.0	0.0	-1.32	-0.95
Japan	2 621	2 562	1.33	-0.25	16.1	16.5	1.50	0.23
Kazakhstan	119	134	-2.93	0.56	5.0	5.1	-4.33	-0.36
Korea	1 989	2 125	3.54	0.40	30.3	32.4	3.20	0.43
Malaysia	244	255	0.96	0.78	6.0	5.5	-0.40	-0.29
Pakistan	0	0	..	..	0.0	0.0	25.17	-1.71
Philippines	1 796	1 774	-0.11	2.86	13.0	11.2	-1.61	1.63
Saudi Arabia	17	15	13.90	0.00	0.4	0.3	11.30	-1.18
Thailand	909	911	0.10	0.10	10.2	10.1	-0.27	0.04
Turkey	0	0	..	..	0.0	0.0	-1.56	-0.45
Viet Nam	3 514	4 831	1.47	3.79	28.4	36.2	0.44	3.11
OCEANIA	811	891	2.30	1.24	15.3	14.8	0.82	0.07
Australia	588	631	2.28	0.98	18.2	17.5	0.89	-0.01
New Zealand	114	130	3.10	1.36	18.6	19.5	2.10	0.66
DEVELOPED COUNTRIES	41 100	41 912	0.79	0.14	22.4	22.3	0.36	-0.06
DEVELOPING COUNTRIES	71 193	85 116	-0.38	1.59	8.9	9.4	-1.66	0.51
LEAST DEVELOPED COUNTRIES (LDC)	2 527	3 424	6.31	3.43	2.3	2.4	3.87	1.22
OECD³	40 307	41 278	1.19	0.22	22.6	22.4	0.63	-0.05
BRICS	56 355	67 426	-1.10	1.38	13.7	15.5	-1.86	0.90

.. Not available

Note: Calendar year; except year ending 30 September for New Zealand. Average 2018-20est: Data for 2020 are estimated.

1. Refers to all current European Union member States (excludes the United Kingdom)
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 retail weight. Carcass weight to retail weight conversion factors of 0.7 for beef and veal, 0.78 for pigmeat and 0.88 for both sheep meat and poultry meat.

Source: OECD/FAO (2021), "OECD-FAO Agricultural Outlook", *OECD Agriculture statistics* (database). dx.doi.org/10.1787/agr-outl-data-en

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 2018-20est	2030	2011-20	2021-30	Average 2018-20est	2030	2011-20	2021-30	Average 2018-20est	2030	2011-20	2021-30
WORLD	130 629	153 479	2.98	1.43	13 203	15 807	1.57	2.13	14 951	17 470	2.46	1.91
NORTH AMERICA	23 674	26 547	1.80	1.10	247	270	-0.05	0.71	3 675	4 188	-0.51	1.73
Canada	1 438	1 667	2.27	1.55	176	197	-0.70	0.99	137	153	-5.46	1.19
United States	22 235	24 880	1.77	1.07	71	73	1.73	0.00	3 537	4 034	-0.26	1.75
LATIN AMERICA	26 813	32 026	1.82	1.65	2 271	2 894	3.16	2.57	4 573	5 806	0.85	3.34
Argentina	2 164	2 562	1.60	1.47	10	5	-10.55	0.00	232	343	-1.66	3.81
Brazil	13 890	16 235	1.40	1.44	0	0	..	..	4 095	5 184	0.92	3.54
Chile	770	924	2.11	1.61	142	118	8.06	-0.18	176	202	5.26	0.18
Colombia	1 656	2 007	5.23	2.21	108	309	9.22	10.15	2	1	-16.75	-1.15
Mexico	3 485	4 183	3.05	1.57	999	1 033	3.30	-0.03	4	7	-6.33	5.85
Paraguay	51	66	13.60	2.18	26	34	1.83	3.16	6	5	177.71	-3.06
Peru	1 742	2 453	5.54	3.17	77	69	16.21	-1.39	2	0	-22.89	..
EUROPE	21 886	23 445	3.33	0.48	2 259	2 299	-1.15	0.62	3 619	4 042	6.28	0.84
European Union ¹	13 457	14 116	2.84	0.35	811	929	-1.70	1.63	2 383	2 602	3.90	1.21
United Kingdom	1 843	1 888	2.48	-0.20	580	713	2.25	2.46	357	313	2.61	-2.01
Russia	4 582	4 870	5.36	0.56	245	121	-11.29	-7.13	267	350	34.47	1.54
Ukraine	1 146	1 537	2.66	1.55	373	276	7.03	-0.84	398	530	24.83	0.85
AFRICA	6 585	9 132	3.72	3.09	2 059	2 917	3.04	4.84	173	118	4.94	-2.81
Egypt	1 458	2 202	5.96	4.05	43	43	-5.48	4.97	4	3	1.83	-0.79
Ethiopia	77	107	3.82	3.35	1	1	..	2.91	0	0	..	..
Nigeria	244	241	3.41	0.32	13	28	28.13	22.68	0	0	..	..
South Africa	1 855	2 610	2.45	2.78	532	529	4.90	1.36	65	62	-2.58	-0.95
ASIA	50 112	60 486	4.01	1.63	6 289	7 326	1.69	1.57	2 846	3 244	5.61	1.39
China ²	21 980	25 010	3.16	0.53	954	776	8.92	-5.41	431	458	-0.75	1.83
India	4 051	5 133	5.82	3.85	1	2	..	11.64	5	0	-8.60	-24.89
Indonesia	3 381	3 875	9.59	2.65	0	0	-18.06	..	2	1	-6.56	-9.40
Iran	2 302	2 886	2.76	2.18	4	1	-30.35	0.77	56	18	-2.91	-4.50
Japan	1 637	1 665	2.05	-0.04	910	879	2.96	-0.33	10	12	6.98	0.00
Kazakhstan	205	311	8.73	3.24	200	249	1.41	1.92	11	10	32.70	-1.76
Korea	912	987	3.79	0.61	195	199	3.66	-0.11	48	44	4.77	-1.19
Malaysia	1 844	2 300	3.25	2.09	76	140	6.52	6.65	201	105	6.78	-6.24
Pakistan	1 522	2 280	8.83	3.47	1	1	-10.29	2.10	9	8	10.28	-4.90
Philippines	1 373	1 557	3.87	2.08	315	731	14.99	9.16	1	1	-24.44	-0.68
Saudi Arabia	817	1 258	7.56	2.41	597	447	-4.50	0.00	43	44	3.94	0.00
Thailand	1 764	2 064	2.01	1.78	4	4	-9.17	0.75	1 185	1 487	7.04	2.37
Turkey	2 303	2 882	3.97	1.99	51	48	13.47	0.52	627	907	9.30	2.84
Viet Nam	1 053	1 605	7.49	3.26	176	221	-11.51	6.85	33	28	99.93	-4.00
OCEANIA	1 559	1 843	2.88	1.54	78	101	8.08	3.78	66	72	4.91	1.89
Australia	1 280	1 524	2.43	1.57	0	0	..	..	46	54	2.55	1.87
New Zealand	238	265	5.21	1.21	1	1	136.42	0.00	20	18	13.24	2.00
DEVELOPED COUNTRIES	51 622	57 423	2.52	0.92	4 402	4 584	0.63	0.71	7 482	8 398	2.44	1.23
DEVELOPING COUNTRIES	79 006	96 056	3.28	1.76	8 801	11 223	2.05	2.77	7 469	9 071	2.49	2.58
LEAST DEVELOPED COUNTRIES (LDC)	3 297	4 809	4.81	3.48	946	1 543	2.75	7.34	63	21	18.44	-5.94
OECD³	52 065	57 970	2.44	0.97	4 098	4 570	1.89	1.14	7 379	8 357	1.79	1.42
BRICS	46 358	53 857	2.97	1.19	1 731	1 428	2.66	-3.61	4 862	6 053	1.38	3.21

.. Not available

Note: Calendar year; except year ending 30 September for New Zealand. Average 2018-20est: Data for 2020 are estimated.

1. Refers to all current European Union member States (excludes the United Kingdom)
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 (2021), "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 rfc)		Growth (%) ⁴		FOOD (kg rwe/cap) ⁵		Growth (%) ⁴	
	Average 2018-20est	2030	2011-20	2021-30	Average 2018-20est	2030	2011-20	2021-30
WORLD	128 912	151 831	2.89	1.46	14.8	15.7	1.73	0.54
NORTH AMERICA	20 261	22 645	2.24	0.99	48.7	51.0	1.53	0.42
Canada	1 476	1 726	2.91	1.47	34.7	37.2	1.90	0.69
United States	18 785	20 919	2.19	0.95	50.2	52.7	1.51	0.41
LATIN AMERICA	24 512	29 114	2.13	1.43	33.4	36.4	1.12	0.66
Argentina	1 942	2 224	1.96	1.15	38.2	39.9	0.95	0.33
Brazil	9 795	11 051	1.61	0.60	40.8	43.4	0.78	0.10
Chile	735	840	2.37	1.71	34.2	38.0	1.15	1.59
Colombia	1 762	2 315	5.50	2.99	30.8	38.1	4.19	2.52
Mexico	4 480	5 209	3.12	1.23	30.9	32.5	1.89	0.35
Paraguay	71	95	7.28	2.88	8.9	10.6	5.87	1.78
Peru	1 817	2 522	5.94	3.02	49.2	61.6	4.50	2.15
EUROPE	20 520	21 701	2.31	0.44	24.1	25.7	2.15	0.54
European Union ¹	11 879	12 443	2.27	0.29	23.5	24.8	2.13	0.38
United Kingdom	2 066	2 288	2.39	0.86	26.9	28.6	1.73	0.49
Russia	4 561	4 641	3.00	0.19	27.5	28.5	2.82	0.39
Ukraine	1 122	1 283	0.35	1.28	22.4	27.6	0.82	1.97
AFRICA	8 471	11 931	3.53	3.57	5.8	6.3	0.91	1.22
Egypt	1 496	2 242	5.33	4.08	13.1	16.3	3.11	2.39
Ethiopia	77	107	3.91	3.34	0.6	0.7	1.14	1.00
Nigeria	257	269	3.26	1.35	1.1	0.9	0.59	-1.08
South Africa	2 322	3 077	3.19	2.61	34.9	41.0	1.69	1.54
ASIA	53 577	64 567	3.65	1.63	10.3	11.5	2.65	0.95
China ²	22 503	25 328	3.48	0.27	13.8	15.2	2.96	0.11
India	4 046	5 135	5.85	3.86	2.6	3.0	4.70	2.99
Indonesia	3 379	3 875	9.60	2.65	11.0	11.4	8.27	1.75
Iran	2 251	2 869	2.58	2.25	23.9	27.2	1.22	1.28
Japan	2 543	2 532	2.38	-0.14	17.6	18.5	2.56	0.34
Kazakhstan	394	550	4.32	2.73	18.7	23.5	2.82	1.79
Korea	1 059	1 143	3.67	0.55	18.2	19.7	3.33	0.59
Malaysia	1 719	2 335	3.02	2.93	47.4	56.9	1.64	1.83
Pakistan	1 515	2 273	8.79	3.52	6.2	7.6	6.55	1.75
Philippines	1 687	2 287	5.49	3.89	13.7	16.3	3.90	2.65
Saudi Arabia	1 371	1 662	1.05	1.77	35.2	37.2	-1.25	0.57
Thailand	597	580	-3.74	0.36	7.6	7.3	-4.10	0.29
Turkey	1 727	2 024	2.52	1.60	18.2	20.0	0.92	1.08
Viet Nam	1 196	1 798	1.05	3.81	10.9	15.2	0.03	3.13
OCEANIA	1 572	1 872	3.01	1.63	33.5	35.1	1.53	0.46
Australia	1 234	1 470	2.43	1.56	43.1	45.9	1.04	0.56
New Zealand	219	248	4.72	1.15	40.4	42.1	3.71	0.45
DEVELOPED COUNTRIES	48 558	53 624	2.35	0.87	29.9	32.2	1.91	0.66
DEVELOPING COUNTRIES	80 354	98 207	3.22	1.79	11.3	12.3	1.89	0.71
LEAST DEVELOPED COUNTRIES (LDC)	4 180	6 331	4.21	4.35	4.2	5.0	1.82	2.12
OECD³	48 800	54 199	2.49	0.93	30.9	33.2	1.92	0.66
BRICS	43 227	49 232	3.17	0.79	11.8	12.7	2.37	0.31

Note: Calendar year; except year ending 30 September for New Zealand. Average 2018-20est: Data for 2020 are estimated.

1. Refers to all current European Union member States (excludes the United Kingdom)
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 retail weight. Carcass weight to retail weight conversion factors of 0.7 for beef and veal, 0.78 for pigmeat and 0.88 for both sheep meat and poultry meat.

Source: OECD/FAO (2021), "OECD-FAO Agricultural Outlook", OECD Agriculture statistics (database). dx.doi.org/10.1787/agr-outl-data-en

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 2018-20est	2030	2011-20	2021-30	Average 2018-20est	2030	2011-20	2021-30	Average 2018-20est	2030	2011-20	2021-30
WORLD	15 862	18 359	2.03	1.46	1 131	1 152	2.34	0.65	1 169	1 185	1.73	0.39
NORTH AMERICA	92	95	-0.30	-0.12	127	117	4.35	0.11	3	3	-9.20	-0.04
Canada	17	17	0.69	0.05	22	24	2.18	0.51	0	0	..	..
United States	76	78	-0.51	-0.15	105	94	4.88	0.02	3	3	-9.29	-0.05
LATIN AMERICA	454	473	0.63	0.14	21	19	-3.79	1.59	23	21	-1.52	-2.14
Argentina	52	57	-1.61	0.71	0	0	..	..	3	4	-3.22	-0.11
Brazil	133	136	2.14	0.09	5	4	-2.33	0.45	0	0	..	..
Chile	14	13	-1.55	-1.18	0	0	..	..	6	5	-0.14	-2.26
Colombia	11	11	2.86	0.08	0	1	..	2.05	0	0	..	..
Mexico	104	110	0.74	0.38	6	4	-7.18	0.26	1	1	..	0.00
Paraguay	2	3	-5.99	0.68	0	0	..	..	0	0	..	..
Peru	39	42	-0.79	0.84	0	0	..	..	0	0	..	..
EUROPE	1 292	1 260	0.58	-0.11	262	252	-2.72	0.04	172	151	1.23	-0.98
European Union ¹	637	628	0.11	0.01	164	151	-1.79	-0.21	56	65	6.12	0.94
United Kingdom	307	290	0.51	-0.45	88	92	-3.33	0.45	97	69	-2.15	-2.54
Russia	215	205	1.73	0.00	2	2	-18.82	0.27	12	11	200.25	0.00
Ukraine	15	15	-3.46	-0.06	0	0	..	..	0	0	..	..
AFRICA	3 402	4 332	1.77	2.26	18	16	-10.41	1.53	30	25	-1.03	-1.94
Egypt	82	107	-5.90	2.40	1	0	-9.19	-1.90	0	0	..	..
Ethiopia	196	274	3.02	3.48	0	0	..	..	13	14	-1.40	3.00
Nigeria	417	457	1.98	1.23	0	0	..	..	0	0	..	..
South Africa	165	178	-0.30	0.21	4	2	-19.13	2.36	1	1	-0.90	-0.87
ASIA	9 452	10 966	2.65	1.48	678	720	6.02	0.91	33	18	-4.68	-2.06
China ²	4 849	5 543	2.63	1.28	359	373	14.32	0.02	0	0	-33.80	..
India	831	993	1.33	1.92	0	0	..	..	14	2	-0.85	-10.47
Indonesia	159	174	5.03	0.94	2	3	6.14	6.77	0	0	..	..
Iran	281	253	-4.70	-0.24	18	1	-12.54	..	0	0	..	..
Japan	0	0	..	..	23	19	-1.56	-1.89	0	0	..	..
Kazakhstan	171	178	1.62	0.35	0	0	..	..	2	1	108.42	-6.04
Korea	2	2	2.43	0.00	17	18	18.34	0.10	0	0	..	..
Malaysia	2	1	-4.85	-4.00	35	50	7.52	2.66	0	0	..	..
Pakistan	732	927	7.17	2.40	0	0	..	..	5	7	-14.52	0.62
Philippines	61	82	1.49	2.99	1	1	0.22	10.71	0	0	..	..
Saudi Arabia	0	0	-46.19	..	27	27	-9.08	0.93	1	1	-11.74	-0.92
Thailand	2	3	4.67	2.11	1	1	1.98	1.35	0	0	..	..
Turkey	454	479	5.47	0.23	0	0	..	..	0	0	..	..
Viet Nam	20	30	13.61	3.90	1	1	-19.55	0.41	0	0	..	..
OCEANIA	1 169	1 233	0.43	0.98	26	27	-1.36	1.01	909	967	2.42	0.82
Australia	709	796	0.87	1.70	0	0	..	..	471	542	4.20	1.64
New Zealand	460	437	-0.20	-0.21	3	4	-0.27	0.00	438	425	0.81	-0.15
DEVELOPED COUNTRIES	3 479	3 688	0.88	0.79	421	401	-1.22	0.07	1 091	1 124	2.22	0.54
DEVELOPING COUNTRIES	12 383	14 671	2.37	1.64	710	751	5.27	0.98	78	61	-3.56	-2.02
LEAST DEVELOPED COUNTRIES (LDC)	2 221	2 944	2.39	2.78	3	3	4.16	-0.42	4	2	0.99	-7.72
OECD³	2 827	2 898	0.99	0.41	438	420	-0.32	0.06	1 072	1 111	2.02	0.56
BRICS	6 193	7 056	2.32	1.28	371	381	11.24	0.04	27	15	2.94	-2.19

.. Not available

Note: Calendar year; except year ending 30 September for New Zealand. Average 2018-20est: Data for 2020 are estimated.

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

Source: OECD/FAO (2021), "OECD-FAO Agricultural Outlook", OECD Agriculture statistics (database). dx.doi.org/10.1787/agr-outl-data-en

ANNEX C

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

Calendar year

	CONSUMPTION (kt cwe)		Growth (%) ⁴		FOOD (kg rwe/cap) ⁵		Growth (%) ⁴	
	Average 2018-20est	2030	2011-20	2021-30	Average 2018-20est	2030	2011-20	2021-30
WORLD	15 901	18 395	2.15	1.46	1.8	1.9	1.00	0.54
NORTH AMERICA	209	202	2.55	0.01	0.5	0.5	1.83	-0.56
Canada	38	40	1.21	0.32	0.9	0.9	0.22	-0.46
United States	171	162	2.88	-0.06	0.5	0.4	2.19	-0.61
LATIN AMERICA	458	478	0.57	0.30	0.6	0.6	-0.42	-0.46
Argentina	50	54	-1.40	0.77	1.0	1.0	-2.37	-0.05
Brazil	139	141	1.90	0.09	0.6	0.6	1.07	-0.41
Chile	9	8	-2.37	-0.36	0.4	0.3	-3.53	-0.48
Colombia	11	12	3.55	0.22	0.2	0.2	2.27	-0.23
Mexico	115	119	0.39	0.36	0.8	0.7	-0.81	-0.51
Paraguay	2	3	-5.98	0.68	0.3	0.3	-7.21	-0.39
Peru	39	42	-0.79	0.84	1.0	1.0	-2.14	-0.02
EUROPE	1 319	1 317	-0.60	0.18	1.6	1.6	-0.75	0.28
European Union ¹	688	675	-1.35	0.18	1.4	1.3	-1.48	0.26
United Kingdom	297	314	0.16	0.34	3.9	3.9	-0.49	-0.03
Russia	202	193	0.13	0.00	1.2	1.2	-0.05	0.20
Ukraine	14	15	-4.13	-0.04	0.3	0.3	-3.68	0.64
AFRICA	3 325	4 179	1.82	2.13	2.3	2.2	-0.76	-0.19
Egypt	82	107	-5.93	2.38	0.7	0.8	-7.91	0.72
Ethiopia	183	260	3.51	3.52	1.4	1.6	0.74	1.17
Nigeria	421	463	1.93	1.25	1.8	1.5	-0.71	-1.18
South Africa	173	180	-0.90	0.24	2.6	2.4	-2.35	-0.80
ASIA	10 323	11 948	2.89	1.46	2.0	2.1	1.90	0.77
China ²	5 207	5 916	3.13	1.20	3.2	3.6	2.62	1.04
India	806	980	1.21	1.99	0.5	0.6	0.11	1.13
Indonesia	161	177	5.12	1.01	0.5	0.5	3.85	0.12
Iran	281	248	-4.01	-0.05	3.0	2.4	-5.28	-1.00
Japan	23	19	-1.56	-1.89	0.2	0.1	-1.39	-1.42
Kazakhstan	169	177	1.44	0.38	8.0	7.6	-0.02	-0.53
Korea	19	19	15.84	0.09	0.3	0.3	15.46	0.13
Malaysia	39	53	6.67	2.38	1.1	1.3	5.23	1.29
Pakistan	727	920	7.58	2.41	3.0	3.1	5.37	0.66
Philippines	62	83	1.48	3.06	0.5	0.6	-0.05	1.83
Saudi Arabia	172	186	-0.77	0.49	4.4	4.2	-3.03	-0.69
Thailand	3	4	1.53	2.15	0.0	0.0	1.15	2.09
Turkey	454	479	4.89	0.23	4.8	4.7	3.26	-0.28
Viet Nam	21	30	7.68	3.83	0.2	0.3	6.59	3.15
OCEANIA	266	272	-2.59	1.36	5.7	5.1	-3.99	0.20
Australia	221	230	-2.50	1.65	7.7	7.2	-3.82	0.66
New Zealand	21	18	-4.49	-1.53	3.8	3.1	-5.41	-2.21
DEVELOPED COUNTRIES	2 720	2 894	0.16	0.86	1.7	1.7	-0.26	0.65
DEVELOPING COUNTRIES	13 181	15 501	2.60	1.57	1.9	1.9	1.28	0.50
LEAST DEVELOPED COUNTRIES (LDC)	2 145	2 794	2.55	2.56	2.2	2.2	0.20	0.37
OECD³	2 121	2 153	0.38	0.33	1.3	1.3	-0.18	0.06
BRICS	6 526	7 409	2.62	1.22	1.8	1.9	1.83	0.74

Note: Calendar year; except year ending 30 September for New Zealand. Average 2018-20est: Data for 2020 are estimated.

1. Refers to all current European Union member States (excludes the United Kingdom)
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 retail weight. Carcass weight to retail weight conversion factors of 0.7 for beef and veal, 0.78 for pigmeat and 0.88 for both sheep meat and poultry meat.

Source: OECD/FAO (2021), "OECD-FAO Agricultural Outlook", OECD Agriculture statistics (database). dx.doi.org/10.1787/agr-outl-data-en

Table C.30. Main policy assumptions for meat markets

		Average 2018-20est	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
ARGENTINA												
Beef export tax ¹	%	8.0	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	100.2	102.6	106.2	108.6	110.3	112.0	113.7	115.4	117.2	118.9	120.7
In-quota tariff	%	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Out-of-quota tariff	%	196.6	196.6	196.6	196.6	196.6	196.6	196.6	196.6	196.6	196.6	196.6
EUROPEAN UNION^{2,3}												
Voluntary coupled support												
Beef and veal ⁴	mIn EUR	1 693	1 693	1 693	1 693	1 693	1 693	1 693	1 693	1 693	1 693	1 693
Sheep and goat meat ⁵	mIn EUR	491	496	496	496	496	496	496	496	496	496	496
Beef basic price ⁶	EUR/kg dwt	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2
Beef buy-in price ^{6,7}	EUR/kg dwt	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9
Beef tariff-quota	kt cwe	359.8	378.3	387.5	389.0	390.6	392.2	392.7	393.2	393.7	394.2	394.7
Pig tariff-quota	kt cwe	203.5	230.3	245.7	246.6	247.5	248.4	249.3	250.2	251.1	252.0	252.9
Poultry tariff-quota	kt rtc	1 017.9	1 024.3	1 026.3	1 028.4	1 030.5	1 032.5	1 034.6	1 036.7	1 038.7	1 040.8	1 042.9
Sheep meat tariff-quota	kt cwe	296.0	296.5	296.7	296.9	297.1	297.1	297.5	297.7	297.9	298.1	298.3
JAPAN⁸												
Beef stabilisation prices												
Upper price	JPY/kg dwt	418.3	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	308.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Beef tariff	%	31.9	26.0	25.2	24.4	23.6	22.7	21.9	21.1	20.2	18.6	16.8
Pigmeat stabilisation prices												
Upper price	JPY/kg dwt	198.3	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	146.7	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	%	3.0	1.8	1.5	1.3	1.0	0.8	0.5	0.3	0.1	0.0	0.0
Standard import price	JPY/kg dwt	373.1	351.7	361.1	311.8	289.1	279.5	268.8	260.0	249.6	243.6	238.0
Poultry meat tariff	%	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4
KOREA												
Beef tariff	%	18.6	13.3	10.6	8.0	5.3	2.6	0.0	0.0	0.0	0.0	0.0
Pigmeat tariff	%	18.6	13.3	10.6	8.0	5.3	2.6	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
MEXICO⁹												
Beef and veal tariff-quota	kt pw	146.7	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 ¹⁰	%	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
Poultry meat tariff-quota	kt pw	200.0	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	%	51.7	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0
Pigmeat tariff-quota ¹¹	kt pw	286.7	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	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0
Out-of-quota tariff	%	51.7	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 2018-20est	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
CHINA												
Beef tariff	%	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5
Pigmeat tariff	%	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0
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	%	19.1	19.1	19.1	19.1	19.1	19.1	19.1	19.1	19.1	19.1	19.1
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	%	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5
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	%	28.5	28.5	28.5	28.5	28.5	28.5	28.5	28.5	28.5	28.5	28.5

Note: Average 2018-20est: Data for 2020 are estimated.

1. In Argentina, a temporary export tax is applied on all goods from September 4th 2018 until December 31st 2020.
2. 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
3. Refers to all current European Union member States (excludes the United Kingdom)
4. Implemented in 24 Member States.
5. Implemented in 22 Member States.
6. Price for R3 grade male cattle.
7. Safety-net trigger.
8. Year beginning 1 April.
9. Intended for countries which whom Mexico has no free trade agreements.
10. 25% for frozen beef.
11. Eliminated in 2020 and replaced by import tariff.

Source: OECD/FAO (2021), "OECD-FAO Agricultural Outlook", OECD Agriculture statistics (database). dx.doi.org/10.1787/agr-outl-data-en