

Chapter 3

Commodity snapshots

This chapter describes the market situation and highlights of the latest set of quantitative medium-term projections for world and national agricultural markets, for the ten-year period 2017-26. It provides information on prices, production, consumption, trade and main uncertainties for cereals, oilseeds, sugar, meat, dairy products, fish, biofuels and cotton. The quantitative projections are developed with the aid of the partial equilibrium Aglink-Cosimo model of world agriculture. The printed version of this chapter only includes the projection highlights for each commodity whereas further details and an extensive statistical annex are available online.

CEREALS

Market situation

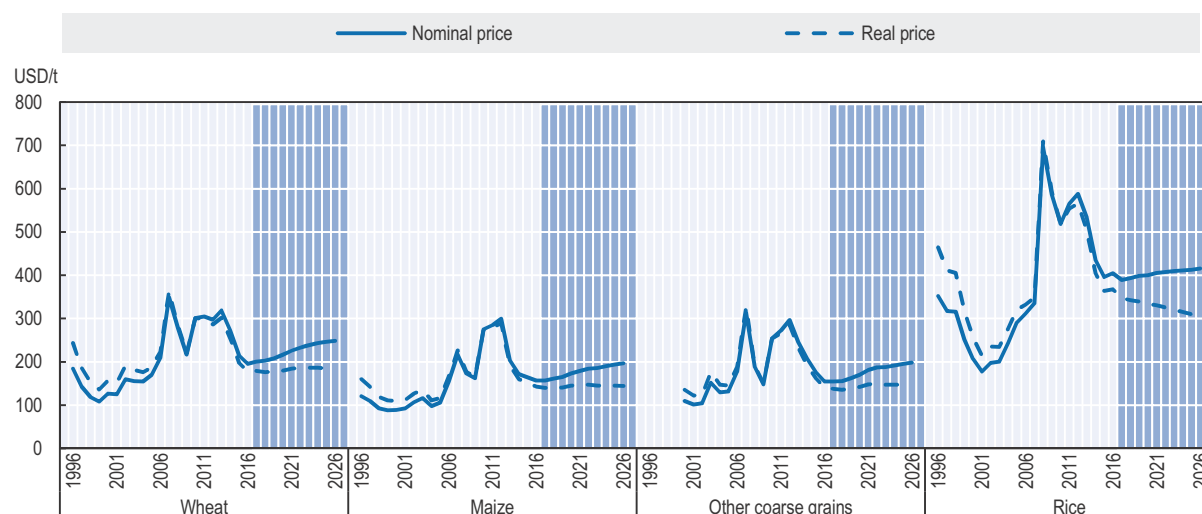
Global supplies of major cereals continued to exceed overall demand, leading to a significant build-up of inventories and much lower prices on international markets as compared to the previous decade. In 2016, world cereals production reached a new high, exceeding the previous peak of 2014. Wheat and maize outputs increased the most, driven by record high crops in several countries, especially among the world's leading exporters. Given the continued large surplus of cereals, downward pressure on world prices is unlikely to be relieved over the coming months.

Projection highlights

Prices will likely remain under pressure in the short term due to low prices during the base period (2014-16), sluggish economic growth conditions, large stocks, low oil prices, and a strong US dollar. Over the course of the medium term, however, cereal prices are projected to increase in nominal terms, but not by enough to keep pace with inflation, which indicates a slight decline in real terms. The decline in real terms is more pronounced for rice since human consumption is its only relevant use category while prices of the remaining cereals are also supported by feed and other uses. Prices of all cereals, even in nominal terms, are projected to be lower on average than in the previous decade, although well above the levels of before 2007.

Global cereal production is projected to expand by 12% between the base period and 2026, mainly driven by yield growth. Compared with the base period, production of wheat in 2026 is projected to be 11% higher (78 Mt), with most of the increase in India (15 Mt), followed by the European Union (10 Mt), the Russian Federation (7 Mt), Pakistan (6 Mt), and the People's Republic of China (hereafter "China") (5.5 Mt). Rice production is set to increase by 13% (66 Mt), with most of the increase (58 Mt) concentrated in Asian countries, led by India (20 Mt), Indonesia (7 Mt), Bangladesh, Thailand (6 Mt each), Viet Nam (4 Mt), and China (3.5 Mt). Maize production is projected to rise by 14% (138 Mt), led by United States (29 Mt), the Brazil (22 Mt), China (14 Mt), Argentina (11 Mt), the European Union (9 Mt) and India (6 Mt). Production of other coarse grains is projected to increase by 10% (30 Mt), with the biggest increases in Ethiopia (4 Mt), India (3.5 Mt), Argentina (2 Mt), the Russian federation (1.9 Mt), and Nigeria (1.8 Mt).

Global cereal use is projected to grow by 13% or 338 Mt, to reach 2 863 Mt by 2026. Wheat consumption is expected to increase by 11% compared to the base period, and will continue to be largely used for human consumption (67% of total use throughout the projection period). The use of wheat for feed is projected to increase, primarily in China, Pakistan and Viet Nam in relative terms, while the use of wheat for the production of biofuels will account for only 1.2% of global use in 2026. Maize use for animal feed is projected to increase to 121 Mt, increasing its overall share over total use from 56% during the base period to 60% in 2026, largely on account of fast expanding livestock sectors in developing countries. Maize for human consumption is projected to grow by 19% (24 Mt), mainly in developing countries also, especially those in Africa where white maize is a main staple in several countries. The use of other coarse grains is also set to grow by 12% (34 Mt), driven by feed demand (17 Mt) followed closely by food demand (16 Mt). The expansion of food use is mainly in Africa (13 Mt), while the European Union and the Russian Federation have the highest expansion for feed. Direct human consumption

Figure 3.1. **World cereal prices**

Note: Wheat: US wheat No.2 Hard Red Winter (fob), maize: US Gulf maize, No.2 Yellow (fob), other coarse grains: Barley (feed Rouen), rice: Thailand, 100% B, 2nd grade.

Source: OECD/FAO (2017), "OECD-FAO Agricultural Outlook", OECD Agriculture statistics (database), <http://dx.doi.org/10.1787/agr-data-en>.
1 <http://dx.doi.org/10.1787/888933522016>

remains the main end-use of rice, a major staple in large parts of Asia, Africa, Latin America, and the Caribbean. Total consumption is predicted to rise from 494 Mt in the base period to 560 Mt by 2026, principally due to population growth. Given the expected demographic changes, Asian countries are expected to account for close to 80% of the projected increase in global rice consumption.

World trade in cereals by 2026 is projected to increase to 448 Mt, up 14% from the base period. At this projected level, global trade would expand at a slightly faster rate than production (1.5% p.a. vs. 1.2% p.a.), increasing the share of global production that is traded to 15.6%. For wheat, this share is expected to reach 23% by 2026, compared with 13% for maize and 15% for other coarse grains. The Russian Federation has started to play a major role on international markets for wheat and maize in the past few years. It was the fifth largest exporter of wheat on average over the past decade and is projected to become the second largest exporter over the projection period, contributing 15% to global trade. Developed countries are expected to continue to be the main exporters of wheat and coarse grains to developing countries, while rice is mostly traded between developing countries. The global players on international rice markets are expected to remain the same, although Cambodia and Myanmar are projected to increase their shares of the international market over the next decade.

Continued lower cereal prices, as compared to the previous decade, will impact planting decisions and hence supply responses. Prices relative to other crops, such as oilseeds, are therefore an important factor as lower prices might lead to a more vigorous reallocation towards other crops. On the demand side, developments in the fastest growing economies will have profound implications for trade. Changes in demand in China and the timing with which they release their maize stocks are the main uncertainties during the projection period.

The expanded cereals chapter is available at

http://dx.doi.org/10.1787/agr_outlook-2017-7-en

OILSEEDS AND OILSEED PRODUCTS

Market situation

Global soybean production increased strongly in 2016, with the United States and Brazil registering record crops. The aggregate world production of other oilseeds (rapeseed, sunflower seed and groundnuts) increased for the first time in three years. Increased sunflower production, mainly in the Russian Federation and Ukraine, helped offset the decreased production of rapeseed in the European Union. This has brought some relief to a relatively tight market situation.

Vegetable oil production declined in the 2015 marketing year for two reasons. First, palm oil yields decreased in Southeast Asia (Chapter 2) due to *El Niño*, and secondly, the market share of soybeans, which contain less oil than other oilseeds, increased, resulting in a stagnation of oilseed oil production. This led to a sharp decline in world stocks and although vegetable oil production recovered in 2016, this will not be sufficient to relieve the relatively tight market in view of the demand growth for vegetable oils to produce biodiesel in 2016, especially in Indonesia and the United States. Per capita food use of vegetable oils also continued to grow both in developed and developing countries.

The growing demand for protein meals, especially in China, has been the main driver behind the expansion of global oilseed production. This has increased the share of protein meals in the returns from the crushing of oilseeds, in particular for soybeans due to their higher protein content.

Projection highlights

In nominal terms all oilseeds and oilseed product prices are projected to increase slightly over the outlook period. Due to saturated per capita food demand, stagnation in the biodiesel sector and ongoing livestock intensification in many emerging economies, vegetable oil prices will decline further than protein meal prices in real terms over the outlook period. Prices for soybeans and other oilseeds are also projected to decline in real terms. Nevertheless, volatility should be expected due to market uncertainties.

During the outlook period, global soybean production is expected to continue to expand, but at 1.9% p.a., which is well below the growth rate of 4.9% p.a. of the last decade. This slowdown is due mainly to a decrease in additional area planted. Brazil soybean production is expected to grow at 2.6% p.a., the fastest of the major producers as more additional land is available, compared to Argentina (2.1% p.a.) and the United States (1.0% p.a.). Consequently, Brazil is projected to overtake the United States as the largest soybean producer. Production of other oilseeds increases by 1.0% p.a. over the next decade, considerably below the 3.4% p.a. growth rate of the previous one. Crushing of soybeans and other oilseeds into meal (cake) and oil are the dominate usage and will increase faster than other uses, in particular direct food consumption of soybeans, groundnuts and sunflower seeds as well as direct feeding of soybeans. Overall, 90% of world soybean production and 86% of world production of other oilseeds are projected to be crushed in 2026.

Vegetable oil includes oil obtained from the crushing of soybeans and other oilseeds (about 55% of world vegetable oil production), palm oil (35%), as well as palm kernel, coconut and cottonseed oils. Growth in demand for vegetable oil is expected to be slower

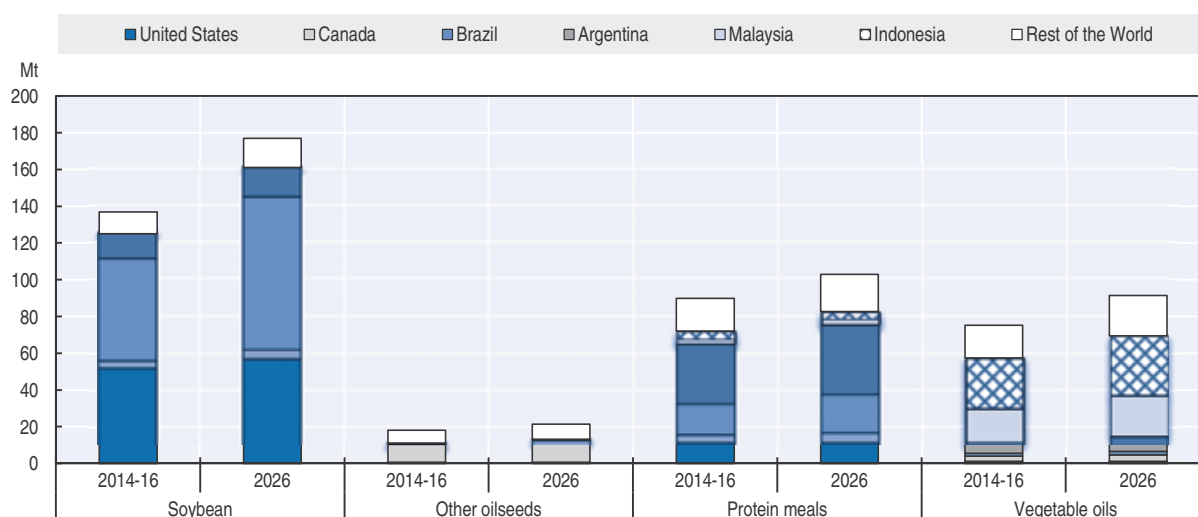
in the coming decade due to reduced growth in per capita food use in developing countries (1.1% p.a. compared to 3.1% in the previous decade) and to the stable demand for vegetable oils that are used to produce biodiesel. Despite a slowdown in the expansion of the mature oil palm area, there will be significant production growth in Indonesia (2.0% p.a. vs. 7.0% p.a. in the previous decade) and Malaysia (1.5% p.a. vs. 1.2% p.a.).

Protein meal production and consumption is dominated by soybean meal. Compared to the past decade, consumption growth of protein meal (1.7% p.a. vs. 4.1% p.a.) will be limited by slower growth in global livestock production and by the fact that the protein meal share in Chinese feed rations has reached a plateau. Chinese consumption of protein meal is projected to grow by 2.3% p.a. compared to 7.9% p.a. in the previous decade, a rate which still exceeds the growth rate of animal production.

Vegetable oil has one of the highest trade shares (42%) of production of all agricultural commodities. This share is expected to remain stable throughout the outlook period, with global vegetable oil exports reaching 91 Mt by 2026. Vegetable oil exports will continue to be dominated by Indonesia and Malaysia (Figure 3.2), which are strongly export-orientated: about two-thirds of Indonesian and more than 80% of Malaysian vegetable oil production is exported. While the share will remain unchanged in the latter over the outlook period, in Indonesia it is expected to decrease as more vegetable oil will be used as feedstock for biofuels. Indonesian exports will grow at 1.5% p.a. compared to 6.1% p.a. in the last decade.

Soybean, other oilseeds and protein meal exports are dominated by the Americas. The phasing-out of export taxes in Argentina opens new opportunities for its soybean and sunflower production and their products, although there could be some reallocation of land in favour of competing grain crops that benefit from immediate export liberalisation. Growth in world trade of soybeans is expected to slow down considerably in the next decade, a development directly linked to the projected slower growth in soybean crushing in China.

Figure 3.2. **Exports of oilseeds and oilseed products by region**



Source: OECD/FAO (2017), "OECD-FAO Agricultural Outlook", OECD Agriculture statistics (database), <http://dx.doi.org/10.1787/agr-data-en>.
1 2 <http://dx.doi.org/10.1787/888933522035>

The expected expansion of soybean and palm oil production will depend on the availability of additional new land, which could be constrained by new legislation seeking to protect the environment. This concerns notably oil palm plantations. Biofuel policies in the United States, the European Union and Indonesia are also major sources of uncertainty because they account for a considerable share of the vegetable oil demand in these countries. In addition, the issues and uncertainties common to most commodities (e.g. the macroeconomic environment, crude oil prices, and weather conditions) have considerable influence on the oilseed complex.

The expanded oilseeds and oilseed products chapter is available at

http://dx.doi.org/10.1787/agr_outlook-2017-8-en

SUGAR

Market situation

After five consecutive seasons of a global production surplus in the international sugar market, the 2015 marketing year marked the start of a production deficit period. Preliminary data suggest that a production deficit will also prevail in the 2016/17 season, as the anticipated production increases are considered insufficient to cover world sugar demand. This global supply shortage can be partially attributed to production setbacks in some key exporting countries, namely Brazil and Thailand, but also to shortfalls in India, the world's second largest sugar producer. It is not expected, however, that the global sugar stock-to-use ratio will return to the low levels observed in 2009 and 2010, despite stock releases on the domestic market undertaken by China.

In contrast to other basic agricultural commodities, current international sugar prices are relatively high. They started to rise sharply in mid-2015 due to tighter market conditions, ending four seasons of relatively weak world prices. High fructose corn syrup, the main competitive alternative representing 10% of the market for sweeteners, also experienced a price increase in 2016 with a realignment of supply-to-demand in the United States, the main exporting country. These elevated international sugar quotations augur well for production prospects in the coming years.

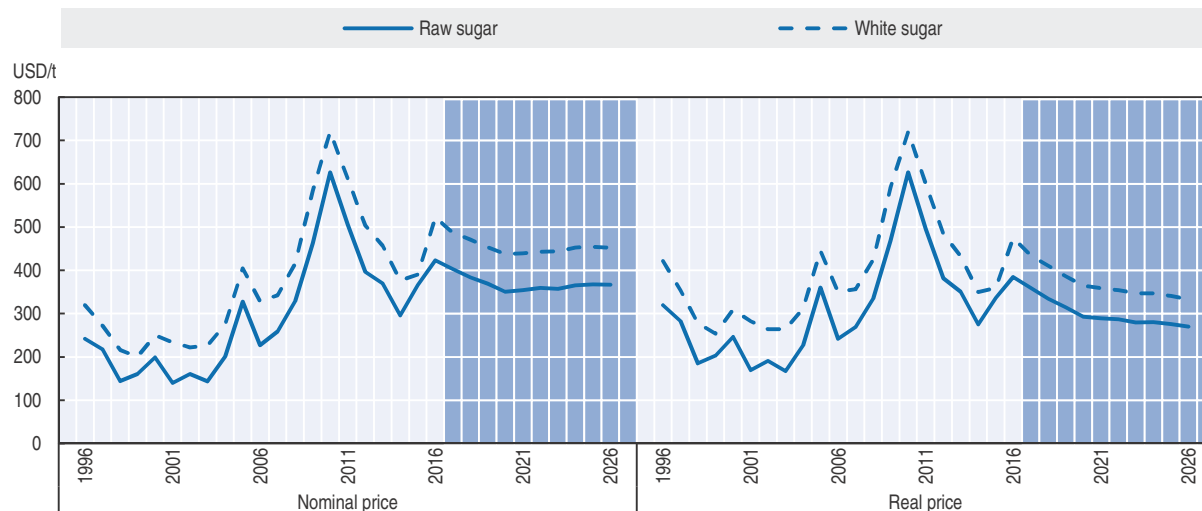
Projection highlights

The start of this outlook period is marked by relatively high sugar market prices, which conditions the market balance for the coming years. Assuming normal weather conditions and low input prices, increased crushing is expected throughout the projection period, thus increasing sugar availability. Sugar prices are expected to come down for some years before increasing slightly in nominal terms, but to decline further in real terms. Slowing population growth and changes in consumer attitudes will most likely moderate future sugar demand growth. The market will continue to be influenced by production shocks, macroeconomic factors, and domestic policies which shape the performance of the sugar sub-sector. Efforts to liberalise this market have taken place in key producing regions, including the European Union (abolition of sugar quota by 2017) and India, and Thailand is expected to reform its sugar programme in reaction to a complaint lodged by Brazil at the WTO.

Sugar crop production is projected to expand in many parts of the world, driven by remunerative returns in comparison to other crops. Sugarcane, cultivated largely in developing countries (Africa, Asia and South America), will continue to be the main crop used to produce sugar. The share of sugar from sugar beet is expected to decline slightly from 14% during the base period to 12.9% in 2026. Brazil is the world's largest sugar producer and exporter, and its sector is expected to recover from the severe financial problems of the last several years. As a sign of recovery, investments for the renewal of sugarcane plantations have strengthened and are anticipated to expand. In addition, on the basis of lower international oil prices, sugar is set to be relatively more profitable in comparison to ethanol at the start of the outlook period but a higher growth is expected in ethanol production throughout the outlook period.

In Asia, robust growth in sugar demand will continue to support expansion of the sugar sector over the outlook period. Efforts to deregulate the sector are not likely to lead to a complete removal of domestic support policies and associated border measures, but will have an impact on the market. Expansion is also foreseen in Africa as the number of operational factories increases (notably in Ethiopia). Globally, the production of sugar crops and sugar should increase by respectively 17% and 24% over the next ten years, and the growth in the share of sugarcane production devoted to producing ethanol should be slightly reduced from about +0.6% p.a. during the last decade to 0.4% this decade.

Figure 3.3. **World nominal and real sugar prices**



Note: Raw sugar world price, Intercontinental Exchange contract No.11 nearby futures price; Refined sugar price, Euronext Liffe, Futures Contract No. 407, London. Real sugar prices are nominal world prices deflated by the US GDP deflator (2010=1).

Source: OECD/FAO (2017), "OECD-FAO Agricultural Outlook", OECD Agriculture statistics (database), <http://dx.doi.org/10.1787/agr-outl-data-en>.
1 <http://dx.doi.org/10.1787/888933522054> 2

Per capita global demand growth for sweeteners is not foreseen to change much over the outlook period compared to the last decade (0.7% p.a. versus 0.6%). Slower population growth will put a brake on demand growth, as will changing attitudes towards sweetened products, which are increasingly linked to obesity and other associated health issues. Some companies have recently taken measures to reduce sugar content in their products. Although no growth is foreseen in sugar consumption in developed countries over the next decade, the reverse is true for developing countries due to population growth and increasing urbanisation, where a higher share of the consumers' budgets is allocated to beverages and food. Globally, the consumption of sweeteners is foreseen to increase by 20.3% over the next ten years.

Sugar will continue to be highly traded, with about 33% of total production expected to be exported over the outlook period. Exports are projected to remain concentrated, with 48% originating from Brazil where sugar cane production is shared between supply of sugar of which 72% are exported and ethanol for domestic use. Sugar exports are likely to expand in countries that have modernised or reformed their sugar sectors (notably Australia, European Union and Thailand). Imports will remain diversified, mostly driven by demand from Africa and Asia.

Following four seasons of steady decline, international sugar prices are at a relatively high level since 2015, although about 28% below the previous peak recorded in 2010. Nominal prices are projected to decline over the next few years and then remain at a relatively high plateau when compared to the long-term average, prior to the 2009 price hike. Prices are projected to reach USD 367/t in 2026, with a premium for white sugar estimated at USD 86/t. In real terms, sugar quotations are expected to decline consistently and average lower than the previous ten years.

The outlook for sugar production is dependent on a number of factors, such as weather events, macroeconomic conditions and national policies. Any changes to these factors will condition the results of the projections and alter the outcome of the sugar balance and prices. For example, any changes to the value of the Brazilian currency (real) against the United States dollar, or changes in the assumed level of world crude oil prices will alter the producer sugar margin and affect the sugar trade. The projections could also be affected by market movements of other competing crops, the feed sector, biofuels, or price fluctuations of other caloric sweeteners.

The expanded sugar chapter is available at
http://dx.doi.org/10.1787/agr_outlook-2017-9-en

MEAT

Market situation

Overall world meat production increased by only 1% to 317 million tonnes in 2016, with growth in the Americas and Europe offset by a down-turn in output in China in particular, but also in Australia. This was the second lowest annual increase in the last decade. Among the various sectors, poultry and bovine meat production expanded, while a decline was evident in pigmeat and sheepmeat production.

Measured by the FAO Meat Price Index, prices began 2016 at low levels, equivalent to those last seen at the end of 2009, and despite some recovery during the course of the year, annual average prices compare to levels attained in 2010, well below recent peaks. Prices rose for all categories of meat, in particular ovine, pig and poultry meat, with bovine meat recording more modest growth. Limited supplies of pigmeat in the European Union and of sheepmeat from Oceania lent support to prices for these products, while firm international demand, in particular from Asia, underpinned poultry meat prices. Meanwhile, recovery in bovine meat production in the United States reduced import requirements, contributing to a smaller lower increase in international prices for this product than for other categories of meat.

Global meat trade recovered in 2016, rising by 5% to 30 Mt. This represents a return to trend levels following the decline in 2015. Trade increased for pigmeat by 9%, poultry meat by 5%, and bovine meat by 3%, while sheepmeat decreased by 3%. At the country level, China in particular increased its imports of meat, along with Chile, Korea, Mexico, the European Union, the Philippines, South Africa, and the United Arab Emirates. By contrast, growth in domestic production reduced imports by the United States and Canada. Australia, the Russian Federation and Angola also imported less. The expansion in world meat exports was led by Brazil and the European Union, followed by the United States, with sales also rising for Argentina, Canada, Mexico, New Zealand, Paraguay and Thailand. Meanwhile, exports by Australia, China, India, South Africa and Turkey fell.

Projection highlights

The outlook for the meat market remains relatively favourable for producers. Feed grain prices have declined and assuming stable weather are set to remain low for the projection period. This lends stability to a sector that had been operating in an environment of particularly high and volatile feed costs over extended periods through the past decade. This is particularly relevant for regions such as the Americas, Australia and Europe, where feed grains are being used more intensively in the production of meat.

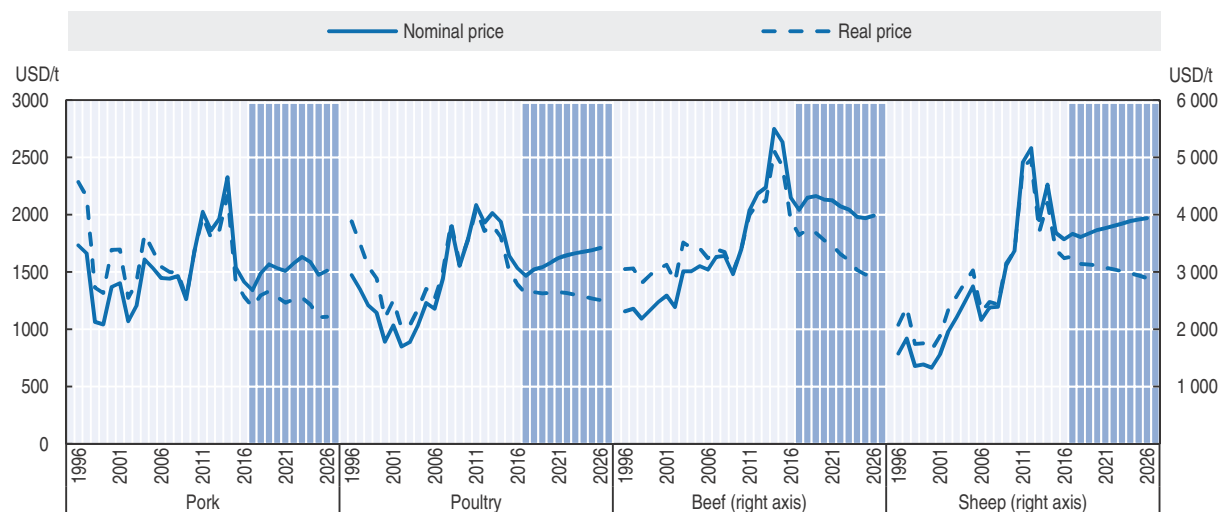
Global meat production is projected to be 13% higher in 2026 relative to the base period (2014-16). This compares with an increase of almost 20% in the previous decade. Developing countries are projected to account for the vast majority of the total increase, with a more intensive use of feed in the production process. Poultry meat is the primary driver of the growth in total meat production in response to expanding global demand for this more affordable animal protein compared to red meats. Low production costs and lower product prices have contributed to making poultry the meat of choice both for producers and consumers in developing countries. In the bovine meat sector, cow herds

are being rebuilt in several major producing regions, but the decline in cattle slaughter in these regions is projected to be offset by higher carcass weights. Production is further increased by rising slaughter numbers in countries that are further along in the rebuilding cycle. This resulted in slightly higher beef production starting in 2016. Production growth is expected to accelerate from 2017 onwards, as slaughter volumes continue to increase. Pigmeat production will also increase after 2017, driven by slow herd expansion in China. The increase in herd size is, however, slowed by increased environmental regulations and animal welfare concerns affecting the pork sector. Production is also expected to increase in the sheepmeat sector with an expected global growth of 2.0% p.a., a higher rate than last decade. Production increases will be led by China, with expansion also in Algeria, Australia, Bangladesh, Islamic Republic of Iran, Nigeria, Pakistan and Sudan.

Globally, the traded share of meat output is expected to remain fairly constant, at around 10%, over the projection period, with most of the increase in volume coming from poultry meat. Import demand growth will be weak during the first years of the outlook period, mainly due to lower imports from China and the Russian Federation. Import demand will strengthen in the second half of the projection period, due to import growth in the developing world. The most significant growth in import demand originates from the Philippines and Viet Nam as well as Sub-Saharan Africa, which captures a large share of additional imports for all meat types. Although developed countries are still expected to account for slightly more than half of global meat exports by 2026, their share decreases steadily relative to the base period. On the other hand, the share of the two largest meat exporting countries, Brazil and the United States, in global meat exports is expected to increase to around 44%, contributing to almost 70% of the expected increase in global meat exports over the projection period.

At the start of the outlook, nominal meat prices are expected to be at levels similar or lower to those registered in 2016. Meat prices are projected to trend only marginally upwards as the market expands and exerts downward pressure on prices. Despite normal cycles for meats with longer production cycles, e.g. beef and sheepmeat, nominal prices for all meats are projected to be higher in 2026 relative to current levels. By 2026, the price for beef is projected to increase to USD 3984/t carcass weight equivalent (c.w.e.) and to increase to USD 3938/t c.w.e. for sheepmeat, while world pigmeat and poultry prices are expected to rise to around USD 1500/t c.w.e. and USD 1 709/t product weight (p.w.) respectively. Poultry meat demand is expected to increase more rapidly than the demand for pigmeat. In real terms, prices are expected to trend downwards for all meat types (Figure 3.4), although meat-to-feed price margins will generally remain within historical trends.

Global meat consumption per capita is expected to stagnate at 34.6 kg retail weight equivalent (r.w.e.) by 2026, an increase of less than half a kg r.w.e. compared to the base period. Nonetheless given high population growth rates in much of the developing world, total consumption is still expected to increase by nearly 1.5% per annum. Additional per capita consumption will consist mainly of poultry while pigmeat will decline globally on a per capita basis. In absolute terms, total consumption growth in developed countries over the projection period is expected to be approximately a fifth of that in developing regions, where rapid population growth and urbanisation remain the core drivers. These drivers are particularly important in Sub-Saharan Africa, where the rate of total consumption growth over the outlook period is faster than any other region. The composition growth is also different, with beef accounting for most of the total growth. Import demand is also expected to continue increasing in South East Asia.

Figure 3.4. **World meat prices**

Note: US Choice steers, 1 100-1 300 lb dressed weight, Nebraska. New Zealand lamb schedule price dressed weight, all grade average. US Barrows and gilts, No. 1-3, 230-250 lb dressed weight, Iowa/South Minnesota. Brazil: Export unit value for chicken (f.o.b.) product weight.

Source: OECD/FAO (2017), "OECD-FAO Agricultural Outlook", OECD Agriculture statistics (database), <http://dx.doi.org/10.1787/agr-outl-data-en>.

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Globally, animal disease outbreaks and trade policies remain among the main factors driving the evolution and dynamics in world meat markets. The implementation of various trade agreements, such as the ratified China-Australia Free Trade Agreement (ChAFTA), or the signed Canada-Ukraine Free Trade Agreement (CUFTA) and the Comprehensive Economic and Trade Agreement (CETA) over the outlook period could increase and diversify meat trade. Domestic policies will also impact the meat sector such as the review in 2018 of the US Farm Bill. Further factors that could impact the meat outlook include consumer preferences and attitudes towards meat consumption. Consumers are showing a preference for free-range meat and antibiotic-free meat products, but the extent to which they are willing and able to pay a premium for them remains unclear.

The expanded meat chapter is available at
http://dx.doi.org/10.1787/agr_outlook-2017-10-en

DAIRY AND DAIRY PRODUCTS

Market situation

International dairy prices started to increase in the last half of 2016, with butter and whole milk powder (WMP) accounting for most of this increase. This reversed a decline in dairy prices that started in 2014 following a decrease in Chinese demand, the Russian Federation's ban on imports from several countries, and an increase in production from some key exporters. From January to December 2016, butter and WMP prices increased by around 40% and 56% respectively.

Butter prices have recovered significantly and future increases will be limited compared to other dairy products. The prices of other milk-based products, such as cheese and skim milk powder (SMP), have increased more slowly but are expected to continue to increase through 2017. The increase in dairy prices in 2016 was due to a slump in milk production in Australia, New Zealand and Argentina and the European Union (only in the second half of 2016), as well as a strong demand for some dairy products, particularly cheese and butter.

In Oceania, milk production has been limited for several reasons, including low dairy prices in 2015-16, adverse weather conditions related to *El Niño*, poor pasture conditions, and higher prices of cull dairy cows which resulted in a contraction of the dairy herd by 1.6% in 2016. This has encouraged a renewal of dairy herds with younger, more productive cows, although the monthly culling rate is slowing down as international dairy prices improve. Considering the production cycle of dairy herds, this suggests a slow recovery in inventories but an increase in yields. Although China, the largest importer of milk products, has decreased its imports, mainly WMP, from the highs of 2013-14, Oceania's dairy exports are slowly recovering, through higher exports to countries such as Algeria, Indonesia, Mexico, the Russian Federation, Yemen, Bangladesh, and Egypt. New Zealand has reduced its production of WMP, but increased its production of cheese in response to world demand.

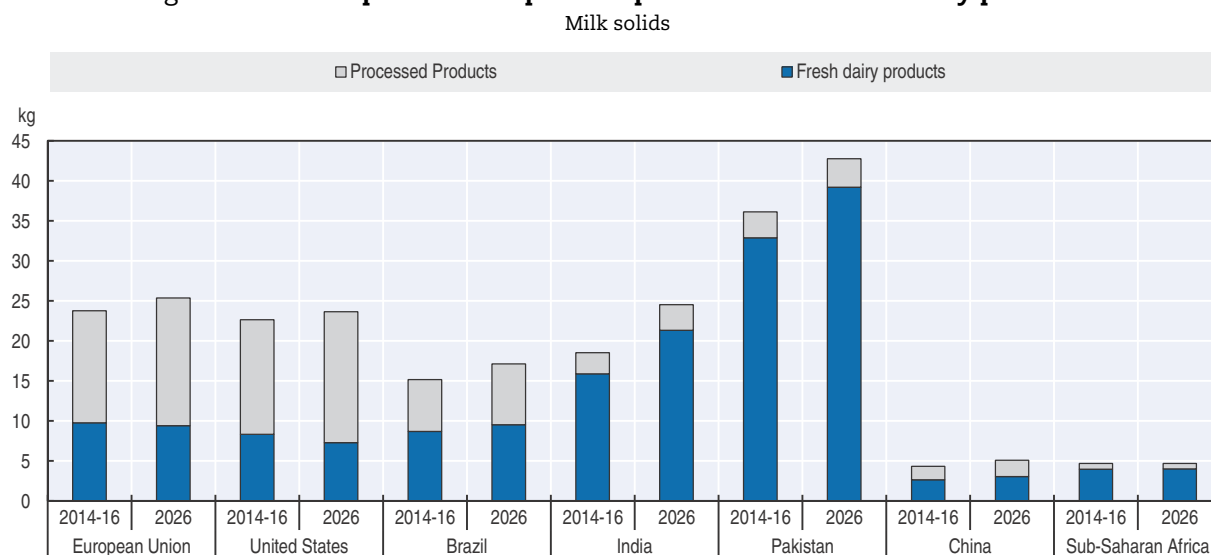
Several factors (in particular the import ban imposed by the Russian Federation, production increases in New Zealand, Australia and the United States, the elimination of the quota restrictions; decreases in WMP and SMP exports to China) created a challenging environment for the EU dairy sector in 2015. This changed in mid-2016. On the supply side, 351 029 tonnes of skim milk powder (SMP) were removed from the market via public purchases through the EU intervention policy. The stock is projected to be released over the next two years. Both domestic and international cheese and butter consumption increased, and some key producers reduced their production. The European Union, however, increased its production, and its exports of cheese and butter grew by 9.5% and 23% respectively, while exports of SMP and WMP decreased by 18% and 5% respectively.

Projection highlights

There is renewed consumer enthusiasm in developed countries for butter and dairy fat over substitutes based on vegetable oil. This trend can be attributed to such factors as more positive health assessments on dairy fat, a change in consumer perceptions towards taste and towards less processed food, with the result that these products are increasingly used in bakery products and recipes. As incomes and population increase, and diets

become more globalised, more dairy products are expected to be consumed in developing countries. In developed countries, per-capita consumption is projected to grow from 20.2 kg in 2014-16 to 21.4 kg in 2026 in milk solids, compared with an increase from 10.9 kg to 13.2 kg in developing countries. There are, however, significant regional disparities amongst developing countries, where fresh dairy products will remain by far the most consumed; this contrasts with developed countries, where consumer preferences tend towards processed products (Figure 3.5).

Figure 3.5. **Per capita consumption of processed and fresh dairy products**



Note: Milk solids are calculated by adding the amount of fat and non-fat solids for each product; Processed products include butter, cheese, skim milk powder and whole milk powder

Source: OECD/FAO (2017), "OECD-FAO Agricultural Outlook", OECD Agriculture statistics (database), <http://dx.doi.org/10.1787/agr-data-en>.

1 <http://dx.doi.org/10.1787/888933522092>

Although in some countries world milk production has been limited in recent years, it is projected to increase by 178 Mt (22%) in 2026, compared to the 2014-16 base period. The share of production from developed countries decreases over time, from 49% in 2016 to 44% in 2026. The majority of the increase in milk production (77%) is anticipated to come from developing countries, in particular Pakistan and India, which are expected to account for 29% of total milk production by 2026, compared to 24% in the base year. The expansion of milk production in developing countries at a rate of 2.7% p.a., is expected to be largely consumed domestically as fresh dairy products. At the world level, production of WMP is increasing at 1.9% p.a.; production of butter and SMP is expected to grow faster at 2% p.a. and 2.5% p.a. respectively, while cheese production should grow at 1.4% p.a.

Starting from a relatively low base in 2016, demand growth will support increases in dairy prices over the medium term. By 2026, cheese prices, currently lower than butter prices, will surpass the latter and be 38% higher than in the base period. The prices of milk powders increase slowly in the short term, due to the slow recovery of powder demand from China. Even though they are not expected to return to the highs of 2013-14, prices of SMP and WMP will increase by 76% and 60% respectively, between the base period and 2026, implying modest increases in real terms.

The projected depreciation over the medium term of the Argentinian and Brazilian currencies with respect to the United States dollar will encourage growth in exports from these countries as they become more competitive. On the import side, the currencies of most large importers – namely Philippines, Egypt, Islamic Republic of Iran, and Indonesia – are expected to depreciate, which will reduce their import demands. In the case of Japan, import demand is constrained by an ageing population, while in Canada the response is limited by the country's domestic dairy policies. Between the base period and 2026, the export share of dairy commodities increases for European Union from 24% to 28%. India – as the world's largest milk producing country – has a large expanding domestic market, and is not projected to become an important player on the export market.

The expanded dairy and dairy products chapter is available at

http://dx.doi.org/10.1787/agr_outlook-2017-11-en

FISH AND SEAFOOD

Market situation

The global fishery and aquaculture sector continued to expand in 2016, albeit at a modest rate. This reflects a number of factors, including diseases in aquaculture production, *El Niño*, regulatory constraints, and the ongoing inability of capture production to continue growing under current exploitation conditions. Aquaculture was responsible for the overall growth in production as capture fisheries experienced lower catches of selected major species including anchoveta (mainly used to produce fishmeal and fish oil).

Although several exporting countries faced supply constraints, the value of international fish trade increased in 2016, recouping part of the losses registered in 2015. This growth in value terms was mainly due to improved prices for a number of highly traded seafood commodities, in particular salmon. According to the FAO Fish Price Index, international fish prices were 7% higher on average in the second half of 2016 compared to the same period in the previous year. Despite higher prices, consumer demand for fish was sustained, with an overall slight increase in per capita fish intake. Due to a revision of historical capture fisheries data new statistics indicate that since 2013 aquaculture has become the main global source of fish for human consumption, rather than 2014 as previously believed.

Projection highlights

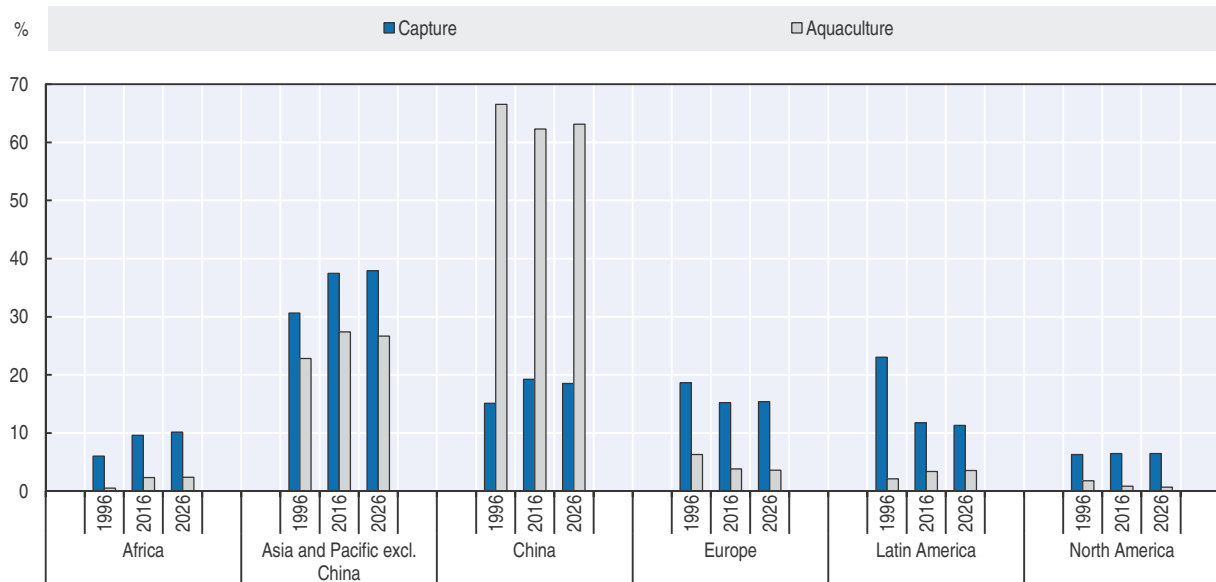
Average nominal traded fish prices are projected to continue increasing at a rate of 0.8% p.a. over the outlook period and are expected to grow by a total of 7.3% by 2026 when compared to the 2014-16 base period. Average nominal prices for both aquaculture and capture species are expected to remain relatively flat or decrease slightly up to 2020 but then begin growing up to 2026. Nominal prices for fishmeal and fish oil continue trending upwards over the outlook period with respective growth rates of 3.4% p.a. and 2.0% p.a.

Total fish production at the global level is anticipated to grow by just over 1% p.a. over the outlook period, a substantial reduction when compared to the 2.4% p.a. growth rate witnessed over the previous decade. In absolute terms total production is expected to reach 193.9 Mt by 2026, growing by a total of 15.2% (25.6 Mt) from the base period, partly affected by the assumed *El Niño* event in 2026. This slowdown is driven by the combined effect of growth rates falling in both capture fisheries and aquaculture. The annual rate of growth in world capture production is anticipated to be negative over the projected time period, at -0.1% p.a., compared with a positive 0.3% p.a. rate of growth observed over the previous decade (2007-16).

The observed slowdown in aquaculture growth is expected to continue, falling from 5.3% p.a. over the period 2007-16 to 2.3% p.a. for 2017-26. Aquaculture production is expected to surpass total capture fisheries production (including that utilised for non-food uses) in 2021, a year when capture production is assumed to be lower as a consequence of *El Niño*, and then continue to increase in absolute terms until the end of the outlook period. Global aquaculture production is anticipated to exceed the 100 Mt mark for the first time in 2025 and to reach 102 Mt in 2026. Continuing profitability as a consequence of relatively low feed prices is behind the ongoing growth of aquaculture, and profitability in the sector is expected to remain high in the short term, especially for species that require small

amounts of fishmeal and fish oil. Production of selected freshwater species, including catfish/pangas, tilapia, and carp are expected to grow fastest over the next decade, all by more than 35%, while salmon/trout and shrimp will grow by around 27% and 28%, respectively, and molluscs by around 24%.

Figure 3.6. **Regional contributions to world fish and seafood production**



Source: OECD/FAO (2017), "OECD-FAO Agricultural Outlook", OECD Agriculture statistics (database), <http://dx.doi.org/10.1787/agr-data-en>.
1 2 <http://dx.doi.org/10.1787/888933522111>

The share of capture fisheries production that is reduced into fishmeal and fish oil will continue to fall over the next decade, with 3.4% less fish being crushed in 2026 than the base period. Efficiency increases, that are enabling greater quantities of oil and fishmeal to be recovered from fish waste, mean that the reduced share going to crushing is not expected to affect total world fishmeal and fish oil production, which will be relatively stable (except in *El Niño* years). Production of fishmeal and fish oil from fish residue will continue to increase, both at rates of 1.6% and 1.5% p.a., respectively, over 2017-26. Between the base period and 2026 the proportion of total fish oil obtained from waste fish will grow from 35.7% to 40.1%; for fishmeal this proportion increases from 26.9% to 29.2% over the same period. With growing demand from aquaculture and a stable supply, the price of fishmeal will continue to increase relative to oilseed meals.

Fish consumed as food is expected to increase at the global level from 148.8 Mt in the base period to 177.4 Mt by 2026 but, mirroring changes in production, the rate of increase is slowing and expected to be 1.4% p.a. over the period 2017-26, down from 2.9% p.a. in 2007-16. Growth in per capita consumption is also anticipated to slow, from 1.7% p.a. in 2007-16 to 0.4% p.a. over the projection and to reach 21.6 kg in 2026. At the world level, proportionally more of the fish being produced will be consumed as food by 2026 (91.5%) than in the base period (88.4%). At the regional level, per capita consumption is expected to continue an increasing trend in the Americas and in Europe, whilst rates of growth will decline in Asia (from 2.5% p.a. over 2007-16 to 0.7% p.a. in 2017-26) and become negative in Africa (-0.3% p.a. over 2017-26). This prospective decline for Africa raises an alarm in terms of food security.

About 35% of total fish production (30% excluding intra-EU trade) is expected to be exported in different product forms for human consumption, fishmeal and fish oil. After falling in 2015-16 world trade of fish for human consumption will once again increase, at a rate of 1.5% p.a. over the outlook period and by a total of 12.9% by 2026 (5.0 Mt lw), but this rate of increase is flatter than that observed in the previous decade. Being the major producers, Asian countries are expected to continue to be the main exporters of fish for human consumption, with their share in world exports to increase from 50% in 2014-16 to 53% in 2026. During the same period, developed countries will reduce their share in world imports from 53% to 52%.

Many factors influence the evolution and dynamics of world fish markets and, as a consequence, a range of uncertainties exist when projecting into the future. For production this includes: environmental degradation and habitat destruction, overfishing, illegal, unreported and unregulated fishing (IUU), climate change, transboundary issues with respect to natural resource utilisation, poor governance, invasion of non-native species, diseases and escapes, accessibility and availability of sites and water resources, as well as to technology and finance. From the perspective of market access, issues include those related to food safety and traceability, the need to demonstrate that products are not derived from illegal and proscribed fishing operations, and uncertainties around the international trade environment in the short to medium term.

The expanded fish and seafood chapter is available at

http://dx.doi.org/10.1787/agr_outlook-2017-12-en

BIOFUELS

Market situation

International prices of biodiesel and ethanol stabilised in 2016. Demand for biofuels was sustained by bioenergy obligatory blending and by the surge in demand for transportation fuels due to continued weak energy prices. Unfavourable price ratios of biofuels to conventional fuels resulted in a limited demand for non-mandated use of biofuels, with the notable exception of Brazil where recent policy reforms in several states favour hydrous ethanol which can be used directly by their flex-fuel vehicle fleet. Despite low crude oil prices, policy decisions were favourable to biofuels in 2016 with developments such as mandate increases and differential taxation systems or subsidies enacted in several countries.

In the United States, the Environmental Protection Agency's (EPA) final rulemaking for 2017 increased the maximum potential access for corn ethanol under the program to the statutory limit of 15 billion gallons and specified an "advanced" mandate that is higher than it would have been if it fully reflected the reduction of the cellulosic mandate. This translates into a strong demand for ethanol and biodiesel, despite the blend wall¹ constraint. The European Commission provided a nuanced message in a July 2016 communication on the limited role that food-based biofuels would play in decarbonising the transport sector post-2020. A revision to the European legislation – the RED2 legislation² – was proposed in February 2017 but is not considered in these projections. It sets a limit of 3.8% for the portion of renewable energy in the transport sector coming from food and feed crops below the current 7% cap.

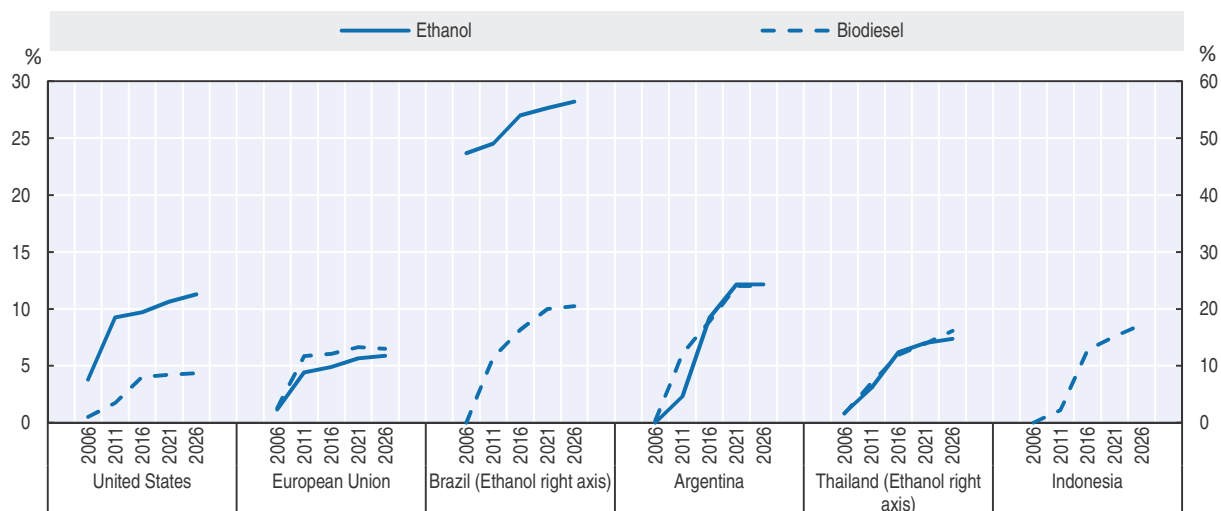
Projection highlights

International crude oil prices are expected to double in nominal terms over the baseline period. This should lower demand for gasoline and diesel fuels, especially in developed countries. Biofuel prices, similar to biofuel feedstock prices, should trend upward but at a slower pace than energy prices. The evolution of ethanol and biodiesel markets over the baseline period is expected to continue to be driven by policies. Biofuel policies are subject to uncertainty and projections; they are based in this *Outlook* on a specific set of assumptions concerning the continuation of the same policies over the next ten years.

For the United States, all mandates are assumed to remain at their announced levels for 2017 except the cellulosic mandate, which should continue to increase moderately. The ethanol blend wall is set to increase to 11.3% by 2026. This *Outlook* thus assumes a limited development of mid-blends of ethanol. In addition, biodiesel use is assumed to increase in the early years of the outlook period, above the biodiesel mandate, to meet part of the advanced mandate (Figure 3.7). The Canadian Federal program called ecoENERGY for biofuels that started in 2008 with incentives of CAD 0.10 per litre for ethanol and CAD 0.26 per litre for biodiesel is gradually phased out with payments reduced to CAD 0.03 and CAD 0.04 respectively for ethanol and biodiesel.

1. The term blend wall refers to short-term technical constraints that act as an impediment to increased ethanol use.

2. <http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52016PC0767R%2801%29>

Figure 3.7. **Evolution of ethanol blending in gasoline fuels and of biodiesel blending in diesel fuels**

Note: Shares are expressed in volume.

Source: OECD/FAO (2017), "OECD-FAO Agricultural Outlook", OECD Agriculture statistics (database), <http://dx.doi.org/10.1787/agr-data-en>.

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<http://dx.doi.org/10.1787/888933522130>

The use of biofuels in the European Union is assumed to be governed by the 2009 Renewable Energy (RED) and Fuel Quality Directives and the 2015 ILUC Directive, as well as by national legislations. The proportion of total transportation energy accounted for biofuels, including double counting for waste- and residue-based biofuels, is expected to reach 6.4% by 2020 and to remain stable thereafter. The remainder of the 10% RED target should be met from other renewable energy sources.

It is assumed that the Brazilian taxation system will remain favourable to hydrous ethanol rather than gasohol, which corresponds to the mandatory mix of 27% ethanol with gasoline. Brazilian ethanol demand is expected to expand by 6 blnL over the outlook period. The Brazilian biodiesel mandate should reach 10% by 2019, leading to an increase in production of more than 40% over the next ten years. In Argentina, it is assumed that the 12% blending mandate for biodiesel and ethanol will be fulfilled by 2020. Argentinean biodiesel production should be also driven by US import demand to meet the latter's advanced mandate.

Thailand is expected to be a significant player on biofuel markets, with most of its biofuel use met by domestic production. The Thai government plan to increase use of biofuels entails a differential taxation and subsidy system that is favourable to higher blends of ethanol in gasoline. The Indian government should continue to support the production of ethanol from molasses. It is assumed, however, that the observed blending share of ethanol in gasoline remains lower than the 5% mandate. The Indonesian government has a 20% biodiesel blending mandate, but this Outlook assumes that this mandate will not be fulfilled. The development of biodiesel production in Indonesia is related to the potential attribution of subsidies to biodiesel producers. Chinese use of ethanol should expand by about 1 blnL with mandates in place in some cities. Chinese ethanol is expected to be produced domestically from maize – thus helping to lower domestic stocks – and from cassava.

Given these expected developments, global ethanol production should expand from 120 blnL in 2016 to 137 blnL by 2026, while global biodiesel production should increase from 37 blnL in 2016 to 40.5 blnL by 2026. By 2026, 55% of global ethanol production should be based on maize and 35% on sugar crops. In 2026, about 30% of global biodiesel production should be based on waste vegetable oils. Advanced biofuels based on residues are not expected to take off over the projection period due to lack of investment in research and development.

Biofuel trade will remain limited. Potential ethanol exporters are the United States where the blend wall limits further increases in domestic demand and Brazil where ethanol could fulfil part of the US advanced ethanol mandate. Brazilian ethanol exports are not expected to expand as US ethanol is likely to remain cheaper over the outlook period. Argentina is expected to be a major biodiesel exporter with most exports directed towards the United States. The future of European biodiesel anti-dumping duties is an important uncertainty in the evolution of biodiesel trade.

The expanded biofuels chapter is available at
http://dx.doi.org/10.1787/agr_outlook-2017-13-en

COTTON

Market situation

There was a light recovery in the world cotton market during the 2016 marketing year following a strong drop in production in 2015, from 26.2 Mt in 2014 to 21.2 Mt. Global cotton production recovered by about 7% in 2016 due to improved yields. In addition, on-going stock releases sustained world consumption, although total world stocks remain at a very high level (18 Mt, 7.5% less than 2015, but still the equivalent of about eight months of world consumption). Production increased in almost all major cotton producing countries, with the exception of China. Pakistan, the United States, Brazil and India increased production by 17%, 24%, 7% and 1%, respectively due to improved yields that over-compensated a contraction in the area planted.

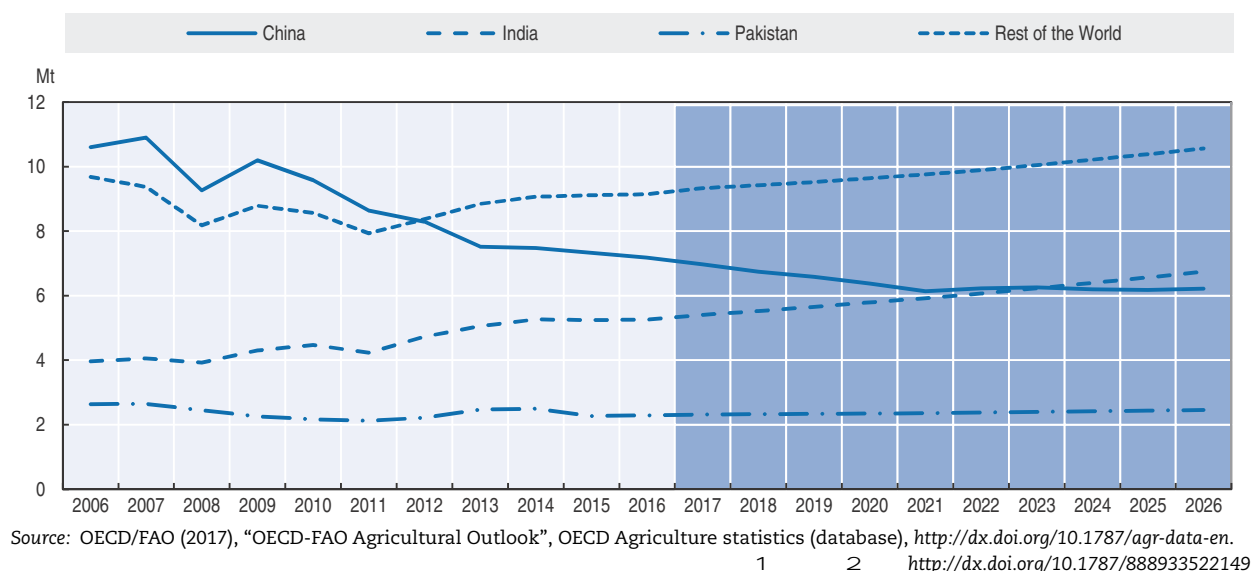
Global cotton demand stagnated at around 23.9 Mt during the 2016 marketing year. Mill consumption estimates in India remained stable at 5.3 Mt, but in China, decreased by 2.0% to 7.2 Mt. Mill consumption increased in Viet Nam by 12% and in Bangladesh by 11%. The increase in Pakistan was 1%. Global cotton trade recovered slightly, increasing by 3.8% in 2016 to 7.7 Mt. Increases in imports by Bangladesh, Pakistan and Viet Nam were insufficient to offset the decline in many countries' import demand since 2015. China's new cotton support policy, which narrowed the price gap between domestic and imported cotton, is behind this sluggish consumption; its domestic cotton price was below the imported price for a limited time in 2016. Moreover, US exports continued to increase, to 2.7 Mt or 27%, over the previous year, and Australia's exports increased by 17% as production recovered.

Projection highlights

Although the world cotton price remains under pressure due to high stock levels and fierce competition from synthetic fibres, cotton prices are expected to be relatively stable in nominal terms. This makes cotton less competitive because prices for polyester are significantly lower than international and domestic cotton prices and likely to decrease further. During 2017-26, relative stability is expected as government support policies continue to stabilise markets in major cotton-producing countries. However, world cotton prices are expected to be lower in real terms than the average during the base period (2014-16).

World production is expected to grow at a slower pace than consumption during the first few years of the outlook period, reflecting anticipated lower price levels and projected releases of global stocks accumulated between 2010 and 2014. More cotton may be auctioned if sales are strong and market prices increase. Last year, around 2.6 Mt were sold through to the end of September 2016. The stock-to-use ratio is expected to fall to 39% in 2026 from 83% in the base period. The global land use devoted to cotton is projected to decrease slightly below the average in the base period. Global cotton yields will grow slowly as production gradually shifts from relatively high yielding countries, notably China, to relatively low-yielding ones in South Asia.

World cotton use is expected to grow at 0.9% p.a. as a result of slower economic and population growth in comparison with 2000s, reaching 26.0 Mt in 2026. Consumption in China is expected to fall by 15% from the base period to 6.2 Mt following the downward

Figure 3.8. **Cotton consumption by region**

trend since 2010, while India will become the world's most important country for cotton mill consumption with 6.7 Mt in 2026. Higher cotton mill consumption by 2026 is also foreseen for Viet Nam, Bangladesh, Indonesia and Turkey, with consumption increasing by 45%, 47%, 10% and 8% respectively.

It is expected that global cotton trade will grow more slowly compared to previous years, especially 2011-13 when growth was driven by surging Chinese imports. Trade in 2026 is expected, however, to exceed the average of the 2000s. To obtain value-added from mills, there has been a shift in the past several years from trading raw cotton to cotton yarn and man-made fibres, and which is expected to continue. Global raw cotton trade will nevertheless reach 8.5 Mt by 2026, 12% higher than the average of the 2014-16 base period, despite cotton being less competitive as prices for polyester are expected to be significantly lower. The United States retains its position as the world's largest exporter, accounting for 33% of world trade, a percentage that will remain stable. Brazil is ranked second with exports expected to reach 1.1 Mt, from 0.9 Mt. Cotton producing countries in Sub-Saharan Africa, as a whole, are expected to increase their exports to 1.5 Mt by 2026. After a strong decrease of cotton imports by China 2012 and 2016 it is expected that import increase over the outlook period to about 1.3 Mt in 2026. Its dominant role in the world cotton market will be significantly challenged as other importing countries emerge and India is assumed to be the largest cotton importer in 2026. It is projected that imports in Bangladesh and Viet Nam will increase to 1.5 Mt, each.

While increases in farm labour costs and competition for resources with other agricultural crops place significant constraints on growth, higher productivity driven by technological progress, including greater adoption of bio-tech cotton, creates significant potential for cotton production to expand in the next decade. Although the medium-term prospects are for sustained growth, there may be potential short-term uncertainties in the current outlook period which may result in short-term volatility in demand, supply and prices. A sudden slow-down in the global economy, a sharp drop in global textiles

and clothing trade, competitive prices and quality from synthetic fibres, and changes in government policies are important factors that can affect the cotton market. The unprecedented high level of stocks is currently a key driver of the world cotton price.

The expanded cotton chapter is available at
http://dx.doi.org/10.1787/agr_outlook-2017-14-en

ANNEX

Commodity snapshot tables

Table 3.A1.1. **World cereal projections**

Marketing year

		Average 2014-16est	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
WHEAT												
World												
Production	Mt	742.1	744.2	755.5	763.3	771.4	780.0	788.1	796.3	804.4	812.4	820.8
Area	Mha	222.7	222.8	223.5	224.0	224.4	224.9	225.3	225.6	226.0	226.4	226.7
Yield	t/ha	3.33	3.34	3.38	3.41	3.44	3.47	3.50	3.53	3.56	3.59	3.62
Consumption	Mt	722.4	754.2	753.2	760.6	767.9	775.9	783.2	791.1	798.9	806.9	815.3
Feed use	Mt	138.5	148.5	146.4	148.0	149.8	152.0	153.9	155.9	157.8	159.9	162.3
Food use	Mt	491.5	507.1	512.8	517.7	522.4	527.3	532.3	537.1	542.1	547.0	551.9
Biofuel use	Mt	13.1	13.2	13.6	13.7	13.6	13.3	13.6	13.4	13.4	13.5	13.3
Other use	Mt	79.2	85.5	80.4	81.3	82.2	83.2	83.5	84.7	85.6	86.5	87.8
Exports	Mt	165.8	168.8	173.9	176.5	178.5	180.4	182.7	184.8	186.9	189.1	191.1
Closing stocks	Mt	226.3	226.1	226.0	226.3	227.3	229.0	231.6	234.4	237.4	240.4	243.5
Price ¹	USD/t	207.3	200.5	202.5	208.2	215.9	225.3	232.7	238.5	243.6	246.2	248.9
Developed countries												
Production	Mt	397.5	396.7	403.7	407.0	410.8	414.6	418.0	421.2	424.4	427.6	430.9
Consumption	Mt	275.2	279.9	277.9	279.5	281.0	282.9	284.4	286.1	287.7	289.4	291.1
Net trade	Mt	115.4	121.4	126.8	129.0	130.6	132.0	133.6	135.0	136.5	138.1	139.5
Closing stocks	Mt	78.4	81.1	80.1	78.7	77.8	77.5	77.5	77.5	77.7	77.9	78.3
Developing countries												
Production	Mt	344.6	347.4	351.8	356.3	360.6	365.4	370.2	375.1	380.1	384.8	389.9
Consumption	Mt	447.2	474.3	475.3	481.1	486.9	492.9	498.8	504.9	511.3	517.6	524.2
Net trade	Mt	-112.9	-119.0	-124.3	-126.6	-128.2	-129.5	-131.2	-132.6	-134.1	-135.6	-137.0
Closing stocks	Mt	147.9	145.0	145.8	147.6	149.5	151.5	154.1	156.8	159.7	162.6	165.3
OECD²												
Production	Mt	298.0	294.0	298.2	300.8	303.4	306.1	308.4	310.7	312.8	315.0	317.1
Consumption	Mt	224.5	230.0	227.4	228.6	229.7	231.1	232.1	233.3	234.4	235.6	236.7
Net trade	Mt	68.5	69.2	71.8	73.7	74.6	75.4	76.5	77.4	78.4	79.4	80.1
Closing stocks	Mt	58.7	58.6	57.5	56.0	55.2	54.8	54.6	54.6	54.6	54.5	54.7
MAIZE												
World												
Production	Mt	1 024.7	1 042.4	1 050.8	1 066.2	1 078.9	1 096.0	1 109.7	1 123.0	1 136.0	1 149.4	1 163.7
Area	Mha	177.9	178.0	178.0	178.7	179.0	179.9	180.4	180.8	181.0	181.4	181.8
Yield	t/ha	5.76	5.85	5.90	5.96	6.03	6.09	6.15	6.21	6.28	6.34	6.40
Consumption	Mt	1 015.1	1 041.3	1 058.3	1 072.2	1 083.2	1 096.0	1 106.6	1 119.6	1 132.1	1 147.0	1 161.2
Feed use	Mt	574.1	600.9	609.3	621.7	629.9	642.1	650.8	662.2	672.8	683.8	695.4
Food use	Mt	131.5	135.7	137.9	140.0	142.1	144.4	146.8	149.2	151.5	153.9	156.3
Biofuel use	Mt	167.5	176.6	181.0	181.4	183.4	182.8	182.7	182.3	181.9	181.5	180.8
Other use	Mt	99.0	84.0	85.4	83.6	81.5	79.8	78.7	77.8	77.3	76.6	75.9
Exports	Mt	135.3	137.9	138.4	139.3	140.6	143.0	145.6	148.1	150.2	152.4	154.5
Closing stocks	Mt	228.8	222.1	213.3	206.1	200.6	199.4	201.3	203.5	206.2	207.5	208.8
Price ³	USD/t	164.4	156.5	161.1	164.9	173.5	179.4	183.8	185.5	190.2	193.6	196.7
Developed countries												
Production	Mt	504.7	513.1	515.0	521.7	526.6	533.4	538.4	543.6	548.4	553.3	558.6
Consumption	Mt	447.5	465.6	472.4	478.4	482.3	486.7	488.8	493.1	496.8	500.8	505.1
Net trade	Mt	46.9	47.9	46.4	46.9	47.1	47.4	48.2	49.8	51.2	52.2	53.2
Closing stocks	Mt	80.3	86.3	82.5	78.8	76.0	75.3	76.6	77.3	77.8	78.1	78.3
Developing countries												
Production	Mt	520.0	529.4	535.8	544.5	552.3	562.7	571.3	579.5	587.6	596.1	605.1
Consumption	Mt	567.6	575.7	586.0	593.8	600.9	609.3	617.8	626.6	635.4	646.2	656.0
Net trade	Mt	-45.4	-46.7	-45.2	-45.7	-45.9	-46.2	-47.0	-48.6	-50.0	-51.0	-52.0
Closing stocks	Mt	148.5	135.8	130.8	127.3	124.6	124.1	124.7	126.2	128.4	129.4	130.5
OECD²												
Production	Mt	474.8	478.5	479.6	485.7	489.9	496.2	500.7	505.3	509.6	513.9	518.7
Consumption	Mt	466.3	485.8	492.6	498.5	502.3	506.8	509.0	513.2	516.9	521.0	525.3
Net trade	Mt	-1.9	-5.8	-7.8	-8.5	-9.6	-9.8	-9.6	-8.4	-7.7	-7.2	-6.8
Closing stocks	Mt	78.3	84.6	79.4	75.1	72.3	71.6	72.9	73.4	73.8	74.0	74.2

Table 3.A1.1. **World cereal projections (cont.)**

Marketing year

		Average 2014-16est	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
OTHER COARSE GRAINS												
World												
Production	Mt	301.4	302.1	305.4	308.5	311.8	315.2	318.6	321.9	325.1	328.5	331.8
Area	Mha	156.2	153.9	154.0	154.2	154.3	154.4	154.6	154.8	154.9	155.1	155.3
Yield	t/ha	1.93	1.96	1.98	2.00	2.02	2.04	2.06	2.08	2.10	2.12	2.14
Consumption	Mt	292.5	298.1	300.3	304.1	307.2	310.4	313.2	316.5	319.7	323.1	326.5
Feed use	Mt	165.1	166.5	166.7	169.1	172.2	174.3	175.7	177.6	179.2	180.7	182.0
Food use	Mt	75.5	77.9	79.6	81.0	82.4	83.8	85.3	86.8	88.4	89.9	91.5
Biofuel use	Mt	7.8	9.8	10.1	10.1	10.2	10.2	10.1	9.9	9.9	9.9	9.9
Other use	Mt	44.2	43.9	43.9	43.9	42.4	42.1	42.2	42.1	42.1	42.6	43.0
Exports	Mt	49.2	43.4	43.9	44.9	45.9	46.7	47.7	48.7	49.5	50.3	51.2
Closing stocks	Mt	58.1	61.4	61.5	60.8	60.4	60.1	60.5	60.9	61.3	61.5	61.8
Price ⁴	USD/t	179.4	154.6	155.6	162.3	170.2	181.1	186.8	187.8	191.9	195.3	198.3
Developed countries												
Production	Mt	188.9	185.4	186.8	188.1	189.3	190.4	191.5	192.5	193.5	194.5	195.5
Consumption	Mt	150.1	156.1	156.1	156.9	157.2	157.5	157.5	157.7	157.9	158.4	158.6
Net trade	Mt	36.2	30.4	30.7	31.6	32.4	33.1	34.0	34.8	35.5	36.1	36.9
Closing stocks	Mt	37.1	41.2	41.2	40.8	40.4	40.3	40.4	40.4	40.5	40.5	40.4
Developing countries												
Production	Mt	112.5	116.7	118.6	120.4	122.6	124.8	127.1	129.4	131.6	134.0	136.4
Consumption	Mt	142.4	142.0	144.2	147.2	150.0	152.8	155.7	158.7	161.7	164.8	167.8
Net trade	Mt	-30.1	-25.3	-25.6	-26.5	-27.4	-28.0	-28.9	-29.8	-30.4	-31.1	-31.9
Closing stocks	Mt	21.0	20.2	20.2	20.0	19.9	19.9	20.1	20.5	20.8	21.1	21.5
OECD²												
Production	Mt	155.0	150.2	151.4	152.4	153.3	154.3	155.3	156.2	157.1	158.0	159.0
Consumption	Mt	129.3	133.2	132.7	133.3	133.4	133.6	133.5	133.9	134.3	134.9	135.4
Net trade	Mt	24.9	18.8	19.0	19.6	20.3	20.7	21.4	22.1	22.6	23.0	23.6
Closing stocks	Mt	30.9	31.7	31.4	30.9	30.6	30.5	30.8	31.0	31.2	31.4	31.4
RICE												
World												
Production	Mt	494.9	506.5	512.5	518.2	524.2	530.0	536.1	542.1	548.3	554.6	560.9
Area	Mha	162.3	163.8	163.8	163.9	164.0	164.0	164.0	164.1	164.1	164.2	164.2
Yield	t/ha	3.05	3.09	3.13	3.16	3.20	3.23	3.27	3.30	3.34	3.38	3.42
Consumption	Mt	494.7	507.6	513.5	518.1	524.3	530.1	535.8	541.8	547.8	553.9	560.1
Feed use	Mt	20.6	21.9	22.6	23.0	23.3	23.7	23.9	24.2	24.5	24.8	25.2
Food use	Mt	399.9	409.6	414.4	418.9	423.8	428.2	432.6	437.0	441.4	445.8	450.3
Exports	Mt	44.0	42.7	43.7	44.7	45.6	46.6	47.4	48.3	49.3	50.2	51.2
Closing stocks	Mt	171.7	169.4	167.9	167.5	166.9	166.4	166.2	166.1	166.2	166.5	166.8
Price ⁵	USD/t	375.1	389.0	393.5	398.4	400.3	405.0	407.6	409.5	411.1	412.9	415.5
Developed countries												
Production	Mt	18.1	17.3	18.2	18.2	18.3	18.4	18.4	18.5	18.5	18.6	18.6
Consumption	Mt	19.1	19.3	19.3	19.3	19.3	19.3	19.3	19.3	19.3	19.3	19.3
Net trade	Mt	-1.1	-1.4	-0.9	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-0.9	-0.9
Closing stocks	Mt	5.1	4.4	4.2	4.1	4.1	4.1	4.2	4.3	4.5	4.7	4.9
Developing countries												
Production	Mt	476.8	489.2	494.3	499.9	505.9	511.6	517.6	523.7	529.8	536.0	542.3
Consumption	Mt	475.6	488.3	494.3	498.8	505.0	510.8	516.5	522.5	528.4	534.6	540.8
Net trade	Mt	1.5	1.8	1.4	1.4	1.5	1.4	1.4	1.4	1.4	1.4	1.3
Closing stocks	Mt	166.5	165.0	163.7	163.4	162.9	162.3	162.0	161.7	161.7	161.8	161.9
OECD²												
Production	Mt	21.8	20.8	21.7	21.6	21.7	21.7	21.7	21.7	21.7	21.7	21.7
Consumption	Mt	22.9	23.3	23.2	23.1	23.0	23.0	22.9	22.9	22.8	22.8	22.7
Net trade	Mt	-1.4	-1.6	-1.2	-1.3	-1.3	-1.3	-1.3	-1.3	-1.3	-1.3	-1.3
Closing stocks	Mt	6.6	5.8	5.4	5.2	5.1	5.1	5.2	5.3	5.4	5.6	5.8

Note: Marketing year: See Glossary of Terms for definitions.

Average 2014-16est: Data for 2016 are estimated.

1. No.2 hard red winter wheat, ordinary protein, United States FOB Gulf Ports (June/May).
2. Excludes Iceland but includes all EU28 member countries.
3. No.2 yellow corn, United States FOB Gulf Ports (September/August).
4. Feed barley, Europe, FOB Rouen.
5. Milled 100%, grade b, nominal price quote, FOB Bangkok (January/December).

Source: OECD/FAO (2017), "OECD-FAO Agricultural Outlook", *OECD Agriculture statistics* (database). doi: dx.doi.org/10.1787/agr-outl-data-en

Table 3.A1.2. **World oilseed projections**

Marketing year

		Average 2014-16est	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
SOYBEAN												
World												
Production	Mt	325.6	338.6	344.6	350.7	358.2	364.7	372.9	378.7	386.7	393.1	401.3
Consumption	Mt	322.2	341.9	347.0	352.0	358.6	365.3	372.5	379.0	386.2	393.3	401.1
Crush	Mt	288.1	306.3	310.8	315.5	321.6	327.9	334.6	340.6	347.5	354.1	361.4
Closing stocks	Mt	36.3	33.5	31.1	29.8	29.4	28.8	29.1	28.8	29.3	29.0	29.2
Price ¹	USD/t	402.2	389.7	398.2	408.6	412.0	430.6	434.0	439.6	439.5	442.2	446.1
Developed countries												
Production	Mt	127.3	128.0	128.9	129.7	131.6	133.3	135.2	136.4	138.2	139.6	141.1
Consumption	Mt	86.7	88.2	89.0	89.2	90.4	91.5	92.8	93.5	94.7	95.6	97.1
Crush	Mt	77.7	79.6	80.3	80.6	81.7	82.8	84.0	84.8	86.0	86.9	88.2
Closing stocks	Mt	11.3	13.2	11.4	10.6	10.3	10.3	10.6	10.7	11.2	11.2	11.7
Developing countries												
Production	Mt	198.3	210.7	215.7	220.9	226.6	231.4	237.7	242.3	248.4	253.4	260.2
Consumption	Mt	235.5	253.7	258.0	262.8	268.2	273.8	279.8	285.5	291.5	297.7	304.0
Crush	Mt	210.4	226.7	230.5	234.9	239.9	245.1	250.5	255.8	261.4	267.2	273.2
Closing stocks	Mt	25.0	20.3	19.7	19.2	19.0	18.5	18.5	18.2	18.1	17.8	17.6
OECD²												
Production	Mt	119.6	119.4	120.1	120.7	122.3	123.7	125.3	126.3	127.9	129.0	130.2
Consumption	Mt	87.5	89.1	89.8	89.9	91.1	92.0	93.1	93.8	94.9	95.8	97.2
Crush	Mt	78.4	80.3	81.0	81.1	82.2	83.2	84.3	84.9	86.1	86.9	88.2
Closing stocks	Mt	11.2	12.9	11.1	10.3	10.0	10.0	10.3	10.4	10.9	10.9	11.3
OTHER OILSEEDS												
World												
Production	Mt	139.9	146.0	147.7	149.4	151.1	152.7	154.3	156.3	158.0	159.3	161.2
Consumption	Mt	141.1	145.2	147.5	149.6	151.4	152.9	154.4	156.2	158.0	159.5	161.0
Crush	Mt	119.5	123.2	125.4	127.4	129.1	130.6	131.9	133.6	135.2	136.6	138.0
Closing stocks	Mt	8.1	8.2	8.4	8.2	7.9	7.8	7.7	7.8	7.8	7.6	7.8
Price ³	USD/t	420.0	431.3	425.0	428.3	441.7	451.4	454.4	459.0	465.8	477.3	483.2
Developed countries												
Production	Mt	84.3	88.1	89.1	90.3	91.4	92.5	93.4	94.9	96.0	96.7	98.0
Consumption	Mt	76.6	79.7	81.1	82.2	82.9	83.6	84.3	85.2	86.0	86.7	87.4
Crush	Mt	69.5	72.5	73.8	74.7	75.3	76.0	76.5	77.3	78.0	78.7	79.2
Closing stocks	Mt	6.2	6.5	6.7	6.5	6.2	6.0	5.9	6.0	6.0	5.8	6.0
Developing countries												
Production	Mt	55.6	57.9	58.6	59.1	59.7	60.2	60.9	61.4	62.0	62.6	63.3
Consumption	Mt	64.6	65.4	66.4	67.4	68.5	69.2	70.1	71.1	72.0	72.8	73.7
Crush	Mt	50.0	50.7	51.7	52.7	53.8	54.6	55.4	56.3	57.2	58.0	58.8
Closing stocks	Mt	1.9	1.7	1.7	1.7	1.7	1.8	1.8	1.8	1.8	1.9	1.9
OECD²												
Production	Mt	57.9	58.6	59.0	59.5	59.9	60.3	60.5	61.2	61.6	61.5	62.0
Consumption	Mt	54.4	54.6	55.5	56.0	56.2	56.4	56.5	56.8	57.0	57.1	57.1
Crush	Mt	49.3	49.6	50.4	50.8	50.9	51.1	51.2	51.4	51.6	51.7	51.6
Closing stocks	Mt	5.4	5.6	5.7	5.5	5.3	5.1	5.0	5.0	5.0	4.8	5.0
PROTEIN MEALS												
World												
Production	Mt	314.5	331.2	335.8	340.3	346.1	352.2	358.6	364.6	371.2	377.5	384.3
Consumption	Mt	308.8	330.1	335.0	340.5	346.4	352.5	358.7	364.8	371.3	377.5	384.2
Closing stocks	Mt	16.0	16.4	17.1	16.9	16.6	16.3	16.2	16.0	15.8	15.8	15.9
Price ⁴	USD/t	340.2	296.4	294.9	297.9	302.6	313.1	313.0	318.7	321.0	327.2	335.3
Developed countries												
Production	Mt	101.2	104.3	105.2	105.7	106.9	108.1	109.4	110.4	111.7	112.8	114.0
Consumption	Mt	116.8	122.0	123.0	123.7	124.8	125.7	126.8	127.8	128.9	129.9	130.8
Closing stocks	Mt	1.8	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
Developing countries												
Production	Mt	213.3	226.8	230.5	234.6	239.3	244.1	249.2	254.2	259.5	264.8	270.2
Consumption	Mt	192.0	208.1	212.0	216.8	221.6	226.8	231.9	237.1	242.4	247.7	253.4
Closing stocks	Mt	14.2	14.7	15.4	15.2	14.9	14.6	14.5	14.3	14.1	14.1	14.2
OECD²												
Production	Mt	94.0	95.9	96.6	96.7	97.7	98.6	99.6	100.3	101.4	102.2	103.2
Consumption	Mt	122.2	128.1	129.2	129.9	131.2	132.1	133.2	134.1	135.3	136.3	137.3
Closing stocks	Mt	1.7	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6

Table 3.A1.2. **World oilseed projections (cont.)**

Marketing year

		Average 2014-16est	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
VEGETABLE OILS												
World												
Production	Mt	179.0	189.9	193.2	196.4	199.6	202.8	206.0	209.3	212.9	216.4	219.8
of which palm oil	Mt	61.8	66.9	68.4	69.9	71.2	72.5	73.7	75.1	76.5	77.9	79.3
Consumption	Mt	180.0	189.5	192.6	196.1	199.5	202.6	205.8	209.1	212.7	216.0	219.5
Food	Mt	141.4	147.8	150.1	153.0	156.2	159.3	162.4	165.5	168.8	171.9	175.2
Biofuel	Mt	23.9	26.2	26.8	27.1	27.0	26.7	26.6	26.5	26.5	26.4	26.4
Exports	Mt	75.3	79.1	80.2	81.6	82.7	84.1	85.5	87.0	88.6	90.0	91.5
Closing stocks	Mt	22.7	21.7	22.2	22.5	22.5	22.7	22.8	23.1	23.3	23.7	24.0
Price ⁵	USD/t	768.3	827.7	829.2	838.2	849.9	862.2	871.8	884.2	896.6	897.4	902.0
Developed countries												
Production	Mt	46.0	47.7	48.2	48.5	49.0	49.5	50.0	50.4	51.0	51.4	51.9
Consumption	Mt	51.2	52.0	51.9	52.1	52.2	52.5	52.6	52.7	52.8	52.7	52.6
Closing stocks	Mt	4.4	4.2	4.2	4.1	4.0	4.0	4.0	3.9	3.9	3.9	3.9
Developing countries												
Production	Mt	132.9	142.2	145.0	147.8	150.6	153.3	156.0	158.9	162.0	164.9	167.9
Consumption	Mt	128.7	137.5	140.7	144.0	147.3	150.2	153.3	156.4	159.8	163.3	166.9
Closing stocks	Mt	18.3	17.5	18.0	18.4	18.6	18.7	18.9	19.1	19.4	19.7	20.0
OECD²												
Production	Mt	37.9	38.3	38.7	38.8	39.0	39.3	39.6	39.8	40.1	40.4	40.6
Consumption	Mt	50.8	51.7	51.8	52.0	52.2	52.5	52.7	52.9	53.1	53.1	53.1
Closing stocks	Mt	3.8	3.5	3.5	3.4	3.3	3.3	3.3	3.3	3.2	3.2	3.2

Note: Average 2014-16est: Data for 2016 are estimated.

1. Soybean, U.S., CIF Rotterdam.
2. Excludes Iceland but includes all EU28 member countries.
3. Rapeseed, Europe, CIF Hamburg.
4. Weighted average protein meal, European port.
5. Weighted average price of oilseed oils and palm oil, European port.

Source: OECD/FAO (2017), "OECD-FAO Agricultural Outlook", OECD Agriculture statistics (database). doi: dx.doi.org/10.1787/agr-outl-data-en

Table 3.A1.3. **World sugar projections**

Marketing year

		Average 2014-16est	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
WORLD												
SUGARBEET												
Production	Mt	261.9	276.3	276.2	270.8	269.5	268.8	268.9	268.7	269.1	270.4	271.4
Area	Mha	4.5	4.6	4.6	4.5	4.4	4.4	4.4	4.3	4.3	4.3	4.3
Yield	t/ha	58.72	59.99	60.12	60.84	61.11	61.41	61.69	61.95	62.24	62.59	62.91
Biofuel use	Mt	13.2	11.4	10.3	10.0	9.9	10.0	9.4	9.4	9.4	9.4	9.3
SUGARCANE												
Production	Mt	1 844.0	1 918.8	1 947.2	1 977.9	1 998.0	2 018.0	2 044.3	2 078.0	2 116.6	2 157.6	2 197.9
Area	Mha	27.0	27.7	27.9	28.2	28.4	28.5	28.7	29.0	29.4	29.8	30.3
Yield	t/ha	68.39	69.34	69.69	70.11	70.45	70.78	71.17	71.54	71.91	72.28	72.65
Biofuel use	Mt	343.5	362.6	371.3	381.4	391.9	399.0	407.4	412.7	418.9	426.0	432.9
SUGAR												
Production	Mt tq	168.6	179.2	184.1	187.2	190.0	192.4	195.3	198.8	202.2	205.9	209.5
Consumption	Mt tq	168.3	174.3	176.7	179.8	183.0	186.5	189.7	192.9	196.3	199.7	203.3
Closing stocks	Mt tq	72.8	67.1	69.8	72.5	74.8	76.1	77.0	78.1	79.3	80.7	82.3
Price, raw sugar ¹	USD/t	361.6	403.2	383.9	369.2	350.8	354.5	359.2	357.4	365.7	367.3	367.1
Price, white sugar ²	USD/t	429.9	487.7	471.4	453.4	437.6	439.3	442.9	443.6	452.2	454.1	452.6
Price, HFCS ³	USD/t	651.5	609.5	538.3	524.3	511.3	516.5	523.8	523.0	535.1	542.9	543.6
DEVELOPED COUNTRIES												
SUGARBEET												
Production	Mt	217.4	218.8	217.3	211.2	209.4	208.2	207.9	207.1	206.5	207.0	206.9
SUGARCANE												
Production	Mt	81.1	83.4	85.0	86.6	87.3	87.1	87.2	87.3	87.6	88.2	88.4
SUGAR												
Production	Mt tq	40.3	43.9	44.3	43.6	43.5	43.4	43.6	43.7	43.8	44.1	44.3
Consumption	Mt tq	47.6	47.8	47.8	47.7	47.8	48.0	48.2	48.4	48.6	48.8	49.1
Closing stocks	Mt tq	14.8	14.6	15.5	16.0	16.5	16.8	16.9	17.0	17.0	17.1	17.2
HFCS												
Production	Mt	9.4	9.7	9.8	10.0	10.3	10.4	10.5	10.5	10.6	10.6	10.7
Consumption	Mt	8.3	8.6	8.6	8.8	9.0	9.2	9.2	9.2	9.2	9.3	9.3
DEVELOPING COUNTRIES												
SUGARBEET												
Production	Mt	44.5	57.5	59.0	59.6	60.1	60.6	61.0	61.7	62.5	63.4	64.5
SUGARCANE												
Production	Mt	1 763.0	1 835.4	1 862.2	1 891.3	1 910.7	1 930.8	1 957.1	1 990.6	2 029.0	2 069.4	2 109.6
SUGAR												
Production	Mt tq	128.3	135.3	139.9	143.6	146.5	149.0	151.7	155.1	158.3	161.8	165.2
Consumption	Mt tq	120.6	126.6	128.9	132.1	135.1	138.4	141.5	144.5	147.7	150.9	154.2
Closing stocks	Mt tq	58.0	52.5	54.3	56.5	58.3	59.3	60.1	61.1	62.2	63.6	65.1
HFCS												
Production	Mt	3.5	3.7	3.7	3.8	3.8	3.9	3.9	4.0	4.0	4.1	4.2
Consumption	Mt	4.5	4.7	4.8	4.8	4.9	5.0	5.0	5.1	5.2	5.3	5.3
OECD⁴												
SUGARBEET												
Production	Mt	170.1	183.6	182.7	176.8	175.1	173.9	173.3	172.0	171.2	171.6	171.5
SUGARCANE												
Production	Mt	120.3	123.1	125.1	127.2	128.3	128.3	129.3	130.3	131.3	132.4	133.3
SUGAR												
Production	Mt tq	39.5	43.4	43.9	43.2	43.2	43.1	43.2	43.3	43.5	43.7	43.9
Consumption	Mt tq	44.9	45.3	45.3	45.1	45.3	45.4	45.5	45.8	46.0	46.3	46.5
Closing stocks	Mt tq	13.1	12.7	13.5	13.8	14.2	14.3	14.4	14.5	14.7	14.8	14.9
HFCS												
Production	Mt	10.6	10.9	11.0	11.3	11.5	11.7	11.7	11.8	11.8	11.9	11.9
Consumption	Mt	10.3	10.6	10.7	11.0	11.2	11.4	11.4	11.5	11.5	11.6	11.6

Note: Marketing year: See Glossary of Terms for definitions.

Average 2014-16est: Data for 2016 are estimated.

tq : tel quel.

HFCS: High fructose corn syrup.

1. Raw sugar world price, ICE contract No11 nearby, October/September.
2. Refined sugar price, White Sugar Futures Contract No. 407, Euronext market, Liffe, London, Europe, October/September.
3. United States wholesale list price HFCS-55, October/September.
4. Excludes Iceland but includes all EU28 member countries.

Source: OECD/FAO (2017), "OECD-FAO Agricultural Outlook", OECD Agriculture statistics (database). doi: dx.doi.org/10.1787/agr-outl-data-en

Table 3.A1.4. **World meat projections**

Calendar year

		Average 2014-16est	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
WORLD												
BEEF AND VEAL												
Production	kt cwe	68 471	69 942	70 652	71 187	71 854	72 621	73 400	74 146	74 766	75 496	76 341
Consumption	kt cwe	67 538	69 723	70 371	70 898	71 557	72 312	73 090	73 843	74 464	75 196	76 041
PIGMEAT												
Production	kt cwe	116 907	117 975	118 639	120 090	121 441	122 515	123 299	124 531	125 683	126 685	127 526
Consumption	kt cwe	116 912	117 931	118 653	120 092	121 437	122 513	123 298	124 525	125 677	126 679	127 521
POULTRY MEAT												
Production	kt rtc	113 875	118 080	119 205	120 885	122 461	124 036	125 608	127 196	128 737	130 256	131 609
Consumption	kt rtc	113 228	118 081	119 208	120 887	122 463	124 036	125 605	127 192	128 734	130 254	131 607
SHEEP MEAT												
Production	kt cwe	14 318	14 711	15 045	15 343	15 760	16 103	16 405	16 719	16 978	17 237	17 515
Consumption	kt cwe	14 288	14 712	15 052	15 354	15 770	16 114	16 410	16 715	16 976	17 238	17 515
TOTAL MEAT												
Per capita consumption ¹	kg rwt	34.1	34.3	34.2	34.3	34.4	34.4	34.4	34.5	34.5	34.6	34.6
DEVELOPED COUNTRIES												
BEEF AND VEAL												
Production	kt cwe	29 428	30 024	30 240	30 223	30 259	30 337	30 458	30 636	30 739	30 880	31 045
Consumption	kt cwe	28 347	29 025	29 137	29 181	29 276	29 331	29 458	29 650	29 781	29 930	30 096
PIGMEAT												
Production	kt cwe	43 006	44 562	44 036	44 182	44 538	44 760	44 746	45 036	45 347	45 540	45 596
Consumption	kt cwe	39 989	41 151	40 854	41 058	41 455	41 634	41 553	41 776	42 041	42 170	42 140
POULTRY MEAT												
Production	kt rtc	47 328	49 261	49 364	49 939	50 466	50 932	51 361	51 810	52 173	52 520	52 756
Consumption	kt rtc	44 873	46 983	47 004	47 438	47 828	48 127	48 440	48 735	48 997	49 215	49 343
SHEEP MEAT												
Production	kt cwe	3 393	3 348	3 385	3 429	3 462	3 496	3 534	3 572	3 600	3 628	3 662
Consumption	kt cwe	2 699	2 732	2 771	2 795	2 816	2 840	2 857	2 875	2 893	2 912	2 934
TOTAL MEAT												
Per capita consumption ¹	kg rwt	66.4	68.3	68.0	68.2	68.5	68.7	68.7	68.9	69.2	69.3	69.3
DEVELOPING COUNTRIES												
BEEF AND VEAL												
Production	kt cwe	39 043	39 917	40 411	40 964	41 595	42 284	42 943	43 510	44 027	44 616	45 297
Consumption	kt cwe	39 191	40 698	41 234	41 718	42 281	42 981	43 632	44 192	44 683	45 266	45 945
PIGMEAT												
Production	kt cwe	73 901	73 412	74 603	75 908	76 903	77 755	78 554	79 496	80 336	81 145	81 930
Consumption	kt cwe	76 923	76 780	77 799	79 034	79 982	80 879	81 745	82 750	83 635	84 509	85 381
POULTRY MEAT												
Production	kt rtc	66 546	68 819	69 842	70 945	71 995	73 104	74 247	75 386	76 564	77 737	78 852
Consumption	kt rtc	68 355	71 098	72 205	73 449	74 635	75 909	77 166	78 457	79 737	81 039	82 265
SHEEP MEAT												
Production	kt cwe	10 926	11 362	11 660	11 915	12 298	12 607	12 871	13 147	13 378	13 610	13 853
Consumption	kt cwe	11 590	11 979	12 281	12 559	12 954	13 275	13 553	13 841	14 083	14 326	14 581
TOTAL MEAT												
Per capita consumption ¹	kg rwt	26.5	26.5	26.5	26.6	26.7	26.8	26.9	27.0	27.0	27.1	27.2
OECD²												
BEEF AND VEAL												
Production	kt cwe	27 605	28 317	28 570	28 597	28 636	28 704	28 811	28 968	29 052	29 192	29 350
Consumption	kt cwe	26 448	27 261	27 425	27 518	27 598	27 623	27 717	27 876	27 970	28 091	28 240
PIGMEAT												
Production	kt cwe	41 120	42 546	41 987	42 091	42 459	42 719	42 717	43 004	43 327	43 548	43 620
Consumption	kt cwe	38 548	39 663	39 384	39 573	39 993	40 205	40 149	40 387	40 663	40 818	40 802
POULTRY MEAT												
Production	kt rtc	45 585	47 402	47 497	48 078	48 612	49 096	49 537	49 994	50 391	50 764	51 018
Consumption	kt rtc	42 865	45 034	45 079	45 521	45 939	46 280	46 612	46 935	47 249	47 514	47 695
SHEEP MEAT												
Production	kt cwe	2 736	2 693	2 729	2 767	2 797	2 825	2 856	2 889	2 911	2 934	2 964
Consumption	kt cwe	2 062	2 096	2 133	2 151	2 168	2 186	2 198	2 210	2 223	2 238	2 256
TOTAL MEAT												
Per capita consumption ¹	kg rwt	67.1	69.0	68.6	68.8	69.1	69.1	69.1	69.3	69.4	69.5	69.5

Note: Calendar Year: Year ending 30 September for New Zealand.

Average 2014-16est: Data for 2016 are estimated.

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 but includes all EU28 member countries.

Source: OECD/FAO (2017), "OECD-FAO Agricultural Outlook", OECD Agriculture statistics (database). doi: dx.doi.org/10.1787/agr-outl-data-en

Table 3.A1.5. **World dairy projections: Butter and cheese**

Calendar year

		Average 2014-16est	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
BUTTER												
World												
Production	kt pw	10 905	11 379	11 644	11 902	12 161	12 412	12 662	12 888	13 108	13 348	13 593
Consumption	kt pw	10 831	11 379	11 609	11 869	12 131	12 380	12 631	12 857	13 077	13 317	13 561
Stock changes	kt pw	13	-3	3	1	-3	0	-1	-2	-1	-2	-1
Price ¹	USD/t	3 396	3 925	3 736	3 788	3 852	3 935	3 982	4 063	4 130	4 214	4 248
Developed countries												
Production	kt pw	4 725	4 877	4 966	5 068	5 155	5 221	5 296	5 350	5 403	5 464	5 526
Consumption	kt pw	4 131	4 316	4 356	4 434	4 501	4 547	4 597	4 631	4 659	4 702	4 745
Developing countries												
Production	kt pw	6 180	6 503	6 678	6 835	7 006	7 191	7 367	7 538	7 705	7 884	8 067
Consumption	kt pw	6 700	7 064	7 252	7 435	7 630	7 833	8 033	8 227	8 419	8 615	8 815
OECD²												
Production	kt pw	4 528	4 691	4 780	4 881	4 968	5 034	5 107	5 159	5 210	5 270	5 330
Consumption	kt pw	3 930	4 156	4 193	4 268	4 332	4 378	4 425	4 456	4 480	4 522	4 564
Stock changes	kt pw	13	-3	3	1	-3	0	-1	-2	-1	-2	-1
CHEESE												
World												
Production	kt pw	22 471	23 139	23 526	23 888	24 240	24 520	24 856	25 197	25 520	25 849	26 193
Consumption	kt pw	22 273	23 064	23 401	23 760	24 101	24 381	24 714	25 054	25 376	25 711	26 049
Stock changes	kt pw	37	-51	0	2	14	14	17	17	18	13	19
Price ³	USD/t	3 633	3 644	3 604	3 700	3 775	3 863	3 946	4 038	4 121	4 210	4 276
Developed countries												
Production	kt pw	17 843	18 410	18 673	18 930	19 184	19 365	19 602	19 854	20 090	20 338	20 600
Consumption	kt pw	16 964	17 609	17 805	18 051	18 283	18 451	18 672	18 900	19 109	19 330	19 555
Developing countries												
Production	kt pw	4 628	4 729	4 853	4 958	5 057	5 156	5 254	5 343	5 430	5 512	5 594
Consumption	kt pw	5 309	5 455	5 596	5 709	5 818	5 929	6 041	6 155	6 267	6 380	6 494
OECD²												
Production	kt pw	17 334	17 896	18 174	18 435	18 691	18 873	19 108	19 354	19 586	19 831	20 092
Consumption	kt pw	16 593	17 280	17 471	17 714	17 942	18 107	18 324	18 547	18 753	18 970	19 192
Stock changes	kt pw	37	-51	0	2	14	14	17	17	18	13	19

Note: Calendar year: Year ending 30 June for Australia and 31 May for New Zealand in OECD aggregate.

Average 2014-16est: Data for 2016 are estimated.

1. FOB export price, butter, 82% butterfat, Oceania.
2. Excludes Iceland but includes all EU28 member countries.
3. FOB export price, cheddar cheese, 39% moisture, Oceania.

Source: OECD/FAO (2017), "OECD-FAO Agricultural Outlook", OECD Agriculture statistics (database). doi: dx.doi.org/10.1787/agr-outl-data-en

Table 3.A1.6. **World dairy projections: Powders and casein**

Calendar year

		Average 2014-16est	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
SKIM MILK POWDER												
World												
Production	kt pw	4 474	4 445	4 396	4 586	4 796	4 917	5 016	5 134	5 240	5 343	5 452
Consumption	kt pw	4 316	4 431	4 596	4 711	4 804	4 911	5 009	5 130	5 239	5 344	5 456
Stock changes	kt pw	16	2	0	2	2	-3	-1	-3	-3	-4	-6
Price ¹	USD/t	2 637	2 522	2 554	2 739	2 859	2 977	3 100	3 217	3 307	3 424	3 530
Developed countries												
Production	kt pw	3 878	3 840	3 787	3 959	4 152	4 258	4 341	4 443	4 536	4 625	4 718
Consumption	kt pw	2 019	2 066	2 158	2 222	2 258	2 305	2 345	2 398	2 443	2 486	2 532
Developing countries												
Production	kt pw	595	604	608	627	644	659	674	691	704	718	734
Consumption	kt pw	2 297	2 365	2 438	2 490	2 546	2 606	2 664	2 732	2 795	2 858	2 924
OECD²												
Production	kt pw	3 646	3 621	3 575	3 745	3 937	4 043	4 125	4 227	4 320	4 408	4 500
Consumption	kt pw	2 047	2 127	2 222	2 290	2 330	2 381	2 425	2 482	2 531	2 578	2 632
Stock changes	kt pw	16	2	0	2	2	-3	-1	-3	-3	-4	-6
WHOLE MILK POWDER												
World												
Production	kt pw	5 166	5 404	5 497	5 596	5 695	5 816	5 939	6 050	6 162	6 265	6 372
Consumption	kt pw	5 238	5 394	5 495	5 595	5 694	5 816	5 939	6 050	6 163	6 266	6 372
Stock changes	kt pw	1	8	0	0	0	0	0	0	0	0	0
Price ³	USD/t	2 889	3 120	3 066	3 207	3 302	3 417	3 513	3 613	3 696	3 803	3 883
Developed countries												
Production	kt pw	2 387	2 371	2 398	2 431	2 469	2 522	2 568	2 615	2 665	2 716	2 759
Consumption	kt pw	615	608	591	604	618	632	646	660	674	686	694
Developing countries												
Production	kt pw	2 779	3 033	3 099	3 165	3 226	3 295	3 371	3 434	3 497	3 549	3 612
Consumption	kt pw	4 623	4 786	4 904	4 990	5 076	5 184	5 293	5 390	5 489	5 579	5 677
OECD²												
Production	kt pw	2 566	2 554	2 585	2 620	2 660	2 714	2 762	2 811	2 863	2 918	2 964
Consumption	kt pw	784	783	771	789	808	827	847	866	885	904	919
Stock changes	kt pw	1	8	0	0	0	0	0	0	0	0	0
WHEY POWDER												
Wholesale price, United States ⁴	USD/t	981	948	978	1 031	1 075	1 127	1 157	1 205	1 234	1 279	1 319
CASEIN												
Price ⁵	USD/t	7 404	7 138	7 268	7 669	7 990	8 283	8 588	8 873	9 096	9 390	9 649

Note: Calendar year: Year ending 30 June for Australia and 31 May for New Zealand in OECD aggregate.

Average 2014-16est: Data for 2016 are estimated.

1. FOB export price, non-fat dry milk, 1.25% butterfat, Oceania.
2. Excludes Iceland but includes all EU28 member countries.
3. FOB export price, WMP 26% butterfat, Oceania.
4. FOB export price, sweet whey non-hygroscopic, Western Europe.
5. Export price, New Zealand.

Source: OECD/FAO (2017), "OECD-FAO Agricultural Outlook", OECD Agriculture statistics (database). doi: dx.doi.org/10.1787/agr-outl-data-en

Table 3.A1.7. **World fish and seafood projections**

Calendar year

		Average 2014-16est	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
FISH¹												
World												
Production	kt	168 293	175 969	178 702	182 271	184 953	185 154	187 894	189 614	191 752	193 936	193 875
of which aquaculture	kt	76 369	82 291	85 171	88 805	91 535	93 864	94 695	96 220	98 332	100 426	102 128
Consumption	kt	168 212	176 761	179 393	182 863	185 444	185 546	188 186	189 805	191 843	193 927	193 866
of which for food	kt	148 756	155 821	159 020	162 928	165 910	167 681	169 522	171 436	173 757	176 112	177 367
of which for reduction	kt	14 187	15 929	15 664	15 517	15 399	13 998	15 050	14 991	14 892	14 817	13 698
Price												
Aquaculture ²	USD/t	2 095.5	2 109.0	2 119.1	2 119.5	2 100.0	2 139.4	2 172.2	2 204.4	2 230.2	2 286.2	2 312.7
Capture ³	USD/t	1 568.3	1 564.7	1 580.6	1 577.3	1 577.8	1 610.6	1 631.0	1 655.1	1 677.2	1 699.3	1 724.8
Product traded ⁴	USD/t	2 837.2	2 850.0	2 867.5	2 826.0	2 800.0	2 852.5	2 896.3	2 939.2	2 973.6	3 008.2	3 043.0
Developed countries												
Production	kt	29 154	29 378	29 464	29 614	29 684	29 704	29 682	29 624	29 597	29 616	29 684
of which aquaculture	kt	4 546	4 748	4 876	5 059	5 228	5 314	5 318	5 317	5 345	5 391	5 471
Consumption	kt	37 148	37 372	37 369	37 286	37 341	37 197	37 497	37 260	37 759	37 721	38 231
of which for food	kt	31 718	32 200	32 306	32 307	32 442	32 326	32 752	32 577	33 132	33 149	33 651
of which for reduction	kt	4 494	4 330	4 263	4 218	4 178	4 188	4 099	4 066	4 031	3 999	4 032
Developing countries												
Production	kt	139 139	146 592	149 238	152 657	155 268	155 450	158 213	159 990	162 156	164 320	164 190
of which aquaculture	kt	71 823	77 544	80 295	83 746	86 307	88 550	89 377	90 903	92 986	95 035	96 657
Consumption	kt	131 064	139 389	142 024	145 577	148 103	148 349	150 689	152 545	154 084	156 206	155 634
of which for food	kt	117 038	123 621	126 714	130 621	133 469	135 355	136 770	138 859	140 625	142 963	143 716
of which for reduction	kt	9 692	11 598	11 401	11 299	11 221	9 811	10 950	10 925	10 861	10 818	9 667
OECD												
Production	kt	31 211	31 536	31 696	31 853	31 968	31 699	31 832	31 939	31 981	32 068	31 694
of which aquaculture	kt	6 299	6 454	6 611	6 837	7 049	7 174	7 188	7 200	7 256	7 325	7 432
Consumption	kt	39 372	39 993	40 099	40 029	40 125	39 822	40 267	40 145	40 717	40 728	41 024
of which for food	kt	32 736	33 330	33 584	33 640	33 833	33 740	34 214	34 110	34 715	34 756	35 307
of which for reduction	kt	5 542	5 656	5 561	5 485	5 438	5 275	5 286	5 300	5 288	5 281	5 053
FISHMEAL⁵												
World												
Production	kt	4 385.2	4 942.2	4 921.4	4 932.4	4 944.6	4 635.5	4 933.1	4 948.1	4 957.0	4 973.2	4 721.4
from whole fish	kt	3 205.6	3 752.9	3 709.9	3 694.9	3 686.0	3 362.0	3 634.4	3 630.7	3 617.8	3 610.0	3 343.3
Consumption	kt	4 457.5	4 856.0	4 929.2	4 944.0	4 957.2	4 811.1	4 771.5	4 958.4	4 967.3	4 985.2	4 877.5
Variation in stocks	kt	-72.4	85.8	-8.2	-12.1	-13.0	-176.0	161.2	-10.7	-10.7	-12.4	-156.5
Price ⁶	USD/t	1 592.3	1 280.9	1 200.3	1 252.9	1 291.0	1 558.6	1 372.1	1 412.0	1 442.0	1 487.8	1 834.9
Developed countries												
Production	kt	1 414.8	1 423.2	1 427.5	1 439.8	1 448.8	1 469.3	1 460.7	1 463.7	1 467.3	1 472.8	1 493.4
from whole fish	kt	1 025.1	1 024.3	1 018.6	1 018.4	1 019.0	1 032.0	1 013.6	1 008.7	1 003.3	998.6	1 010.1
Consumption	kt	1 618.9	1 677.8	1 675.6	1 619.2	1 581.4	1 444.4	1 437.4	1 463.5	1 429.7	1 402.6	1 299.1
Variation in stocks	kt	3.6	28.8	2.8	-1.1	-2.0	-47.0	44.2	0.3	0.3	-1.4	-47.5
Developing countries												
Production	kt	2 970.4	3 518.9	3 493.9	3 492.6	3 495.9	3 166.2	3 472.3	3 484.4	3 489.7	3 500.4	3 228.0
from whole fish	kt	2 180.5	2 728.6	2 691.4	2 676.5	2 667.0	2 330.0	2 620.7	2 622.1	2 614.5	2 611.4	2 333.2
Consumption	kt	2 838.7	3 178.3	3 253.6	3 324.8	3 375.8	3 366.7	3 334.1	3 495.0	3 537.5	3 582.6	3 578.4
Variation in stocks	kt	-76.0	57.0	-11.0	-11.0	-11.0	-129.0	117.0	-11.0	-11.0	-11.0	-109.0
OECD												
Production	kt	1 604.4	1 687.2	1 685.6	1 691.5	1 699.4	1 681.2	1 695.6	1 709.7	1 718.8	1 730.6	1 692.0
from whole fish	kt	1 210.6	1 282.0	1 270.4	1 263.6	1 263.0	1 237.1	1 241.5	1 247.4	1 247.5	1 248.9	1 201.0
Consumption	kt	1 810.5	1 864.0	1 862.9	1 815.1	1 780.2	1 635.0	1 633.7	1 669.6	1 638.7	1 615.6	1 501.5
Variation in stocks	kt	-9.0	62.8	1.8	-2.1	-3.0	-68.0	63.2	-0.7	-0.7	-2.4	-53.5

Table 3.A1.7. **World fish and seafood projections (cont.)**

Calendar year

		Average 2014-16est	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
FISH OIL⁵												
World												
Production	kt	881.2	968.1	962.2	962.3	962.8	909.0	959.2	962.3	964.0	966.9	925.6
from whole fish	kt	566.8	645.0	634.0	628.5	623.8	565.0	609.9	607.7	603.9	601.1	554.0
Consumption	kt	905.1	894.4	963.9	964.0	964.4	961.6	912.7	961.8	963.5	966.4	976.1
Variation in stocks	kt	-23.9	73.7	-1.7	-1.6	-1.6	-52.6	46.4	0.5	0.5	0.5	-50.5
Price ⁷	USD/t	1 808.3	1 607.9	1 622.9	1 641.3	1 667.2	1 907.2	1 720.2	1 747.0	1 774.4	1 794.8	2 055.8
Developed countries												
Production	kt	394.2	354.3	354.2	356.0	357.1	360.0	359.3	360.6	362.0	363.7	367.8
from whole fish	kt	206.1	171.9	169.4	168.3	167.1	167.9	164.8	163.9	163.0	162.1	163.8
Consumption	kt	534.6	502.0	529.8	526.6	524.8	540.1	482.2	515.2	511.8	510.2	536.9
Variation in stocks	kt	-4.7	28.7	0.3	0.4	0.4	-25.6	21.4	0.5	0.5	0.5	-25.5
Developing countries												
Production	kt	487.0	613.9	608.0	606.3	605.7	549.0	599.9	601.7	602.0	603.2	557.8
from whole fish	kt	360.7	473.1	464.6	460.2	456.7	397.1	445.0	443.8	440.9	438.9	390.2
Consumption	kt	370.5	392.4	434.1	437.4	439.6	421.5	430.5	446.7	451.7	456.3	439.2
Variation in stocks	kt	-19.2	45.0	-2.0	-2.0	-2.0	-27.0	25.0	0.0	0.0	0.0	-25.0
OECD												
Production	kt	513.6	469.2	468.4	469.1	470.5	466.8	470.6	474.4	477.3	480.7	474.7
from whole fish	kt	274.4	238.0	234.0	230.8	228.8	221.9	222.4	222.9	222.4	222.1	212.6
Consumption	kt	682.9	640.8	673.2	670.5	669.2	671.7	621.1	660.9	658.4	657.2	669.7
Variation in stocks	kt	-8.0	43.7	0.3	0.4	0.4	-35.6	31.4	0.5	0.5	0.5	-35.5

Note: The term "fish" indicates fish, crustaceans, molluscs and other aquatic animals, but excludes aquatic mammals, crocodiles, caimans, alligators and aquatic plants.

Average 2014-16est: Data for 2016 are estimated.

1. Data are in live weight equivalent.
2. World unit value of aquaculture fisheries production (live weight basis).
3. FAO estimated value of world ex vessel value of capture fisheries production excluding for reduction.
4. World unit value of trade (sum of exports and imports).
5. Data are in product weight.
6. Fishmeal, 64-65% protein, Hamburg, Germany.
7. Fish oil, any origin, N.W. Europe.

Source: OECD/FAO (2017), "OECD-FAO Agricultural Outlook", OECD Agriculture statistics (database). doi: dx.doi.org/10.1787/agr-outl-data-en

Table 3.A1.8. **World biofuel projections**

		Average 2014-16est	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
ETHANOL												
World												
Production	mIn L	117.4	123.7	126.8	128.4	130.7	131.5	132.8	133.7	134.7	135.8	136.7
of which maize based	mIn L	68.2	71.9	73.7	73.9	74.7	74.5	74.5	74.3	74.2	74.0	73.7
of which sugar cane based	mIn L	27.9	29.5	30.2	31.1	31.9	32.5	33.3	33.7	34.3	34.9	35.5
of which advanced ¹	mIn L	0.8	0.8	0.9	0.9	0.9	1.0	1.0	1.1	1.1	1.2	1.2
Consumption	mIn L	117.2	124.6	127.0	128.8	130.8	131.8	133.0	134.0	134.9	136.0	136.9
of which fuel use	mIn L	96.2	103.1	105.4	107.0	108.9	109.6	110.7	111.4	112.1	113.0	113.6
Exports	mIn L	8.2	8.9	9.0	8.9	8.9	8.8	8.7	8.5	8.2	8.1	7.9
Price ²	USD/hl	51.0	44.5	46.0	47.3	48.4	49.7	50.9	51.9	53.2	54.5	55.3
Developed countries												
Production	mIn L	68.1	71.7	73.2	73.2	74.0	73.6	73.6	73.3	73.2	73.0	72.7
Consumption	mIn L	67.7	72.7	74.0	74.4	74.9	74.7	74.8	74.5	74.3	74.1	73.8
of which fuel use	mIn L	62.0	66.7	67.9	68.3	68.8	68.7	68.7	68.4	68.1	68.0	67.6
Net trade	mIn L	0.2	-0.5	-0.8	-0.9	-0.9	-1.0	-1.1	-1.0	-1.0	-1.0	-1.0
Developing countries												
Production	mIn L	49.4	51.9	53.6	55.2	56.7	57.9	59.3	60.4	61.5	62.8	64.0
Consumption	mIn L	49.5	51.9	53.1	54.4	56.0	57.1	58.3	59.5	60.7	61.9	63.1
of which fuel use	mIn L	34.2	36.4	37.5	38.7	40.0	41.0	42.0	43.0	44.0	45.0	46.0
Net trade	mIn L	-0.2	0.5	0.8	0.8	0.9	0.9	1.1	1.0	1.0	1.0	0.9
OECD³												
Production	mIn L	67.2	70.8	72.3	72.3	73.0	72.6	72.6	72.4	72.2	72.0	71.7
Consumption	mIn L	67.9	72.8	74.1	74.5	75.0	74.8	74.9	74.6	74.4	74.2	73.9
of which fuel use	mIn L	62.0	66.7	68.0	68.4	68.8	68.7	68.7	68.4	68.1	68.0	67.6
Net trade	mIn L	-0.8	-1.5	-1.8	-1.9	-1.9	-2.0	-2.1	-2.1	-2.0	-2.0	-2.0
BIODIESEL												
World												
Production	mIn L	33.8	37.3	38.6	39.6	40.3	40.2	40.1	40.2	40.4	40.4	40.5
of which vegetable oil based	mIn L	24.3	27.6	28.4	29.0	29.2	29.0	28.8	28.8	28.8	28.8	28.8
of which waste based	mIn L	8.2	9.0	9.4	9.8	10.2	10.2	10.3	10.4	10.4	10.5	10.5
of which advanced ¹	mIn L	0.3	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.6	0.6
Consumption	mIn L	33.8	37.5	38.8	39.7	40.4	40.3	40.2	40.4	40.5	40.6	40.6
Exports	mIn L	3.5	3.8	4.3	4.2	3.8	3.6	3.3	3.2	3.1	3.1	3.1
Price ⁴	USD/hl	86.9	86.1	88.0	89.4	90.4	90.9	91.3	92.1	92.7	93.2	93.6
Developed countries												
Production	mIn L	20.4	21.7	22.2	22.4	22.3	22.1	21.9	21.8	21.7	21.2	20.9
Consumption	mIn L	22.4	24.3	25.3	25.4	24.8	24.4	24.0	23.7	23.5	23.0	22.6
Net trade	mIn L	-2.2	-2.6	-3.0	-2.9	-2.5	-2.3	-2.0	-1.9	-1.8	-1.8	-1.8
Developing countries												
Production	mIn L	13.4	15.6	16.4	17.2	18.0	18.1	18.2	18.4	18.7	19.2	19.6
Consumption	mIn L	11.3	13.2	13.5	14.3	15.6	15.9	16.3	16.6	17.0	17.5	18.0
Net trade	mIn L	2.1	2.5	2.9	2.8	2.4	2.2	1.9	1.8	1.7	1.7	1.6
OECD³												
Production	mIn L	21.0	22.4	23.0	23.2	23.0	22.8	22.7	22.6	22.4	21.9	21.6
Consumption	mIn L	22.9	24.9	25.9	26.0	25.5	25.1	24.7	24.4	24.1	23.7	23.3
Net trade	mIn L	-2.1	-2.5	-3.0	-2.9	-2.5	-2.3	-2.0	-1.8	-1.8	-1.7	-1.7

Note: Average 2014-16est: Data for 2016 are estimated.

1. Advanced biofuels corresponding to biofuels produced out of agricultural residues, forest residues and dedicated energy crops.

2. Wholesale price, United states, Omaha.

3. Excludes Iceland but includes all EU28 member countries.

4. Producer price Germany net of biodiesel tariff and energy tax.

Source: OECD/FAO (2017), "OECD-FAO Agricultural Outlook", OECD Agriculture statistics (database). doi: dx.doi.org/10.1787/agr-outl-data-en

Table 3.A1.9. **World cotton projections**

Marketing year

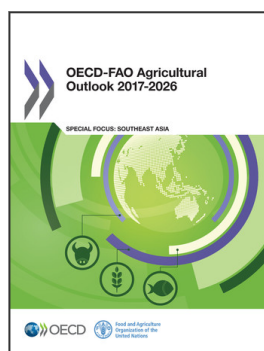
		Average 2014-16est	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
WORLD												
Production	Mt	23.4	22.7	22.6	22.7	23.2	23.7	24.2	24.7	25.2	25.6	26.1
Area	Mha	31.7	30.2	29.7	29.5	29.5	29.6	29.7	29.8	29.9	29.9	30.0
Yield	t/ha	0.74	0.75	0.76	0.77	0.79	0.80	0.81	0.83	0.84	0.86	0.87
Consumption ¹	Mt	24.0	24.0	24.0	24.1	24.1	24.2	24.6	24.9	25.2	25.6	26.0
Exports	Mt	7.6	7.8	7.8	7.9	7.9	8.0	8.0	8.1	8.2	8.4	8.5
Closing stocks	Mt	19.8	16.5	14.9	13.3	12.1	11.4	10.9	10.4	10.2	10.1	10.0
Price ²	USD/t	1 582.8	1 480.7	1 467.2	1 442.1	1 460.5	1 546.7	1 568.2	1 572.3	1 572.5	1 573.3	1 576.0
DEVELOPED COUNTRIES												
Production	Mt	5.6	6.0	5.9	5.9	6.0	6.0	6.1	6.2	6.3	6.4	6.5
Consumption	Mt	1.7	1.8	1.8	1.8	1.8	1.8	1.9	1.9	2.0	2.0	2.0
Exports	Mt	4.1	4.6	4.6	4.6	4.6	4.6	4.6	4.7	4.7	4.7	4.8
Imports	Mt	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
Closing stocks	Mt	1.8	2.1	2.0	1.8	1.7	1.7	1.7	1.7	1.7	1.7	1.7
DEVELOPING COUNTRIES												
Production	Mt	17.7	16.7	16.7	16.8	17.2	17.6	18.1	18.5	18.9	19.3	19.7
Consumption	Mt	22.3	22.2	22.2	22.3	22.3	22.3	22.7	23.0	23.3	23.6	23.9
Exports	Mt	3.5	3.2	3.2	3.2	3.3	3.4	3.4	3.5	3.5	3.6	3.7
Imports	Mt	7.0	7.3	7.3	7.3	7.4	7.4	7.5	7.6	7.7	7.8	7.9
Closing stocks	Mt	18.0	14.4	12.9	11.5	10.4	9.8	9.2	8.7	8.5	8.3	8.3
OECD³												
Production	Mt	5.2	5.5	5.4	5.4	5.5	5.6	5.6	5.7	5.8	5.9	5.9
Consumption	Mt	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.4	3.4	3.4
Exports	Mt	3.3	3.9	4.0	4.0	4.0	4.0	3.9	4.0	4.0	4.1	4.1
Imports	Mt	1.7	1.7	1.7	1.7	1.7	1.7	1.6	1.6	1.6	1.6	1.6
Closing stocks	Mt	2.5	2.8	2.6	2.5	2.4	2.3	2.3	2.3	2.4	2.4	2.4

Note: Marketing year: See Glossary of Terms for definitions.

Average 2014-16est: Data for 2016 are estimated.

1. Consumption for cotton means mill consumption and not final consumer demand.
2. Cotlook A index, Middling 1 3/32", c.f.r. far Eastern ports (August/July).
3. Excludes Iceland but includes all EU28 member countries.

Source: OECD/FAO (2017), "OECD-FAO Agricultural Outlook", *OECD Agriculture statistics* (database). doi: dx.doi.org/10.1787/agr-outl-data-en



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