

EXECUTIVE SUMMARY

This report presents the outlook for the major EU agricultural commodity markets and for agricultural income until 2030. The outlook is based on a set of assumptions that are deemed plausible at this point in time.

Although EU biofuel policy changes after 2020 are still unclear, the biofuels market will remain policy-driven. Despite this, the main factor affecting the market after 2020 will be the reduction in overall petrol and diesel use. Reduced demand for biodiesel from vegetable oils will exert downward pressure on rapeseed production in the EU.

EU cereal prices are expected to progressively gain momentum, climbing to above EUR 170/t on average. This comes against the backdrop of restricted land availability, recovering energy prices and sustained demand. In this context, the possibility of price spikes cannot be ruled out, particularly in response to climate events.

Now that sugar quotas have come to an end, the EU is expected to become a net exporter of sugar.

The livestock sector should benefit from steadily growing world demand and affordable feed prices. This could open the way for the EU dairy sector to expand in response to increasing global and domestic demand, despite the difficulties linked to high price volatility.

In the last few years EU meat consumption per capita has recovered from the economic crisis. Looking forward, meat consumption is expected to stabilise before falling slightly. Poultry consumption and exports should continue to increase, while the marginal increase in pigmeat production will be exclusively driven by export demand. By contrast, beef production and consumption are expected to fall.

Finally, specialised crops such as fruit and vegetables, olive oil and wine are expected to continue their recent trends for stagnating or slightly decreasing consumption and growing exports.

Since the negotiations on the UK's exit from the EU are ongoing, the projections are made on basis of a European Union of 28 Member States, i.e. including the UK, for the full duration of the outlook period.

Arable crops

Utilised agricultural area has continued to decline in recent years, albeit at a slower pace. This trend is expected to continue, bringing utilised agricultural area to 172 million ha by 2030. The same trend applies to arable land over the outlook period. The share of permanent grassland in total utilised agricultural area will remain stable, in line with current Common Agricultural Policy (CAP) requirements.

The **biofuels** market continues to be driven by changes in policy. Developments after 2020 are hard to anticipate as they will take place in a new, as yet undecided policy environment. Under current

assumptions, post-2020, the biggest driver will be the reduction in overall petrol and diesel use. We expect reduced fuel use to result in marked reductions in biodiesel and ethanol consumption by 2030. Given the existing production capacity, the production of biofuels should decrease less than consumption and be favoured over imports. The current lack of long-term investments continues to hamper the development of advanced biofuels.

Global **sugar** consumption is continuing to grow. However, changing consumer preferences and increasing health concerns are expected to reduce EU total sugar consumption by 5 % by 2030 in favour of isoglucose and other sweeteners. World sugar production is on the rise again after 2 years of global deficit, steering the sugar market back into surplus. Increased sugar production will maintain pressure in 2018 on the already low world white sugar price before it stabilises. With the end of sugar quotas, EU production is projected to increase by 12 % by 2030, making the EU a net exporter. The increase will be concentrated in the most cost-effective regions, driven by increases in sugar beet yield.

EU **cereal** production is expected to grow further to 341 million t by 2030, driven by feed demand, good export prospects (in particular for wheat) and increasing use of cereals in industry. However, stronger growth will be held back by the limited potential for expanding the areas under cultivation and by slower yield growth in the EU than in other regions of the world. Cereals stocks are expected to stabilise below historical levels, in particular for wheat and barley. Prices are expected to recover from their current lows to above EUR 170/t on average and at close to EUR 194/t for common wheat at the end of the period. We could see price spikes during the outlook period caused by climate events, particularly if these occur in successive years.

For **oilseeds**, the expected lower demand for vegetable oils from the biofuel market will create pressure on the rapeseed area. Increasing demand for protein meals will mainly be met by increasing soya bean imports and by domestic soya bean production. **Protein crops** recently experienced a strong revival, with record production in 2017/2018. This was driven by a favourable policy environment and good demand. However, area growth may slow down over the outlook period, given pressures on feed prices and input use. This, together with some yield improvements, will lead to a mild increase in production in the EU.

Feed use is expected to rise further over the outlook period in response to more poultry and dairy production and more intensive beef production. Feed prices, remaining below the high levels of recent years, will contribute to the animal production increase.

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Milk and dairy products

Despite the difficulties faced in recent years, growing global and EU demand are expected to support world dairy markets in the long term. However, world market price variability will continue and short-term market unbalances cannot be ruled out.

Global trade in **whole milk powder, skimmed milk powder, cheese and butter** is expected to grow on average by 1 million t of milk equivalent per year. This is significantly below the average growth we have seen for almost all products in the last 10 years. The one exception is butter, for which trade will expand faster than in the last decade. China will remain the world's leading importer of dairy products. Shipments to China are expected to increase considerably, although less than in the past.

We expect the EU to supply close to 30 % of the increase in world import demand for whole milk powder, skimmed milk powder, cheese and butter. Including whey powder and fresh dairy products, EU exports are expected to grow on average by more than 400 000 t of milk equivalent per year, mainly in cheese and skimmed milk powder.

In parallel, close to 900 000 t of milk per year would be needed to satisfy the growth in EU domestic use. This will be mainly for cheese and for the processing of other dairy products such as dairy desserts, fat-filled milk powders, infant milk formula, protein and whey concentrates. Alongside other commodities such as meat and tomatoes, more dairy products will be used as ingredients to meet the rising demand for processed foods such as pizza, prepared meals, pastry and cakes. By contrast, direct consumption of liquid milk is expected to continue decreasing.

Sustained EU and global demand is expected to drive an increase in EU **milk** production below 1 % per year (or 1.4 million t). This is an average given that weather and market conditions can affect milk yield strongly. This growth can be seen as moderate when we consider that the EU increased deliveries by 10 million t in 2 years between 2014 and 2016. However, since the EU will be competing with New Zealand and the US, this level of growth matches the potential increase in demand.

The room for the EU to increase production is limited by the need for sustainable use of natural resources. However, the same is true of its main competitors. At the same time, we will gradually see changes in production systems and a significant rise in organic production in response to consumers' expectations.

Meat

World population and income growth are expected to drive higher global meat demand. This will also contribute to higher EU meat exports, as EU meat consumption is stabilising at best. Still, 90 % of total EU meat production will go to EU consumers.

World meat consumption is expected to increase by 14 % between 2017 and 2030, mainly satisfied by

increasing domestic production. This is almost equivalent to a year's total meat production in the EU.

EU per capita consumption is expected to continue increasing slightly in the first years of the outlook period. However, as we approach 2030, per capita consumption will drop back towards its current level, while poultry will take some market share from other meats. Consumption of fresh meat is expected to decrease, while overall consumption will be supported by further use of meat products as ingredients in processed products.

Beef production recovered in 2014-2016 after the restructuring of the dairy sector. Production is expected to stabilise in 2017, before returning to a downward trend. This will be mainly dictated by the declining size of the cow herd and lower domestic demand.

After several years of continuous decline, **sheep and goat** production and consumption are expected to increase marginally, thanks to improved profitability and the implementation of voluntary coupled support.

Thanks to booming exports to China, **pigmeat** prices recovered in 2016 and 2017. Pigmeat production took advantage of this short-term opportunity but is expected to expand only marginally by 2030 despite favourable feed prices. This is because of stabilising EU consumption and competition on the world market.

EU **poultry** meat production should expand by around 5 % over the outlook period, driven by promising growth in world import demand and domestic consumption. EU exports are expected to increase by 18 % by 2030 thanks to sales of different cuts of poultry meat and offal, and a wide portfolio of destinations. However, prices will be under pressure due to increased competition in the world market and will stay below the levels seen in 2011-2015.

Specialised crops

In the **olive oil** sector, further structural improvements during the outlook period are expected, resulting in improved yields and higher production. The highest growth is expected in Spain and Portugal. This additional production will serve both growing world demand and increasing EU consumption, apart from in the main producing countries, i.e. Spain, Italy, Greece and Portugal, where consumption will decrease further. The EU will strengthen its position as the biggest world producer and exporter of olive oil.

Further modernisation of the **apple** sector is expected to achieve higher yields, thanks to old orchards being partially replaced with new plantings, new production methods, improved disease resistance and pest management. The increasing yields combined with a reduction in production area are expected to lead to a stabilisation of apple production. Consumption of fresh apples is expected to stabilise, while that of processed apples is likely to fall slightly. However, higher exports will make up for this decline.

EU total **wine** consumption is expected to stabilise after a long period of decline. However, total domestic

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use will decrease due to a reduction in other winemaking processes and products such as distillation, vinegar and vermouth. The EU is expected to maintain steady growth in wine exports, thanks to strong demand for wines with a geographical indication and sparkling wines. Overall, these developments will lead to a small decrease in EU production, while rising yields will not fully offset a decrease in the acreage of vineyards.

EU production of fresh **tomatoes** is expected to remain relatively stable despite increasing yields driven by longer production seasons. However, the value of production is likely to continue to rise as greater product segmentation adds value. Consumption of fresh tomatoes is expected to go down slightly. By contrast, consumption of processed tomatoes is expected to marginally grow, driven by higher demand as an ingredient and for food products that evoke a Mediterranean lifestyle.

Agricultural income

Total EU agricultural income is expected to decrease considerably in real terms over the outlook period. By contrast, agricultural income per worker is expected to increase slightly due to continued structural change and the numbers of people leaving agriculture. The expected increase in the value of production will be partly offset by the expected increase in production costs, stemming mainly from higher energy prices and stronger depreciation.

Environmental aspects

This report also discusses the market outlook's expected impact on certain environmental indicators such as those for emissions of greenhouse gases and air pollutants and the nitrogen surplus. Changes in the livestock sector will be a major factor for emissions. This is because most emissions of greenhouse gases in agriculture stem directly or indirectly from animal production. Emissions are expected to decrease as a result of a projected decrease in total EU livestock numbers by 2030. Compared with 2008, greenhouse gases are expected to fall by 1.5 % and ammonia emissions by 10 %.

In 2030, the projected average nitrogen surplus in the EU-28 will be 2.6 % lower than in 2008. The largest fall in the surplus is projected in EU regions where a reduction in herd size is expected. However, part of the projected fall is due to a general increase in nitrogen-use efficiency in the crop sector. Environmental pressures seem to be accumulating in some EU regions with a high density of livestock, with density still increasing in some places. These may face some challenges if they continue their specialisation trends.

Main assumptions

The outlook presented in this report assumes:

- a continuation of current agricultural and trade policies;
- normal agronomic and climatic conditions;

no market disruption.

These assumptions imply relatively smooth market developments. This is because they correspond to the average trend agricultural markets are expected to follow. In reality markets tend to be much more volatile.

The 2030 outlook reflects current agricultural and trade policies, including future changes already agreed upon. The outlook takes account of the 2013 reform of the CAP and the options on how to implement it, but the level of aggregation of the model does not allow for all details to be modelled. The impacts of the 'Agricultural Omnibus package' on the CAP have not been explicitly taken into consideration in the models. Instead this was done through expert judgement.

Only free-trade agreements that are already in place or are about to enter into force are taken into account. This means that the agreements with Canada, with the Southern African Development Community and the update of the agreement with Ukraine are included, but not other trade agreements that have been negotiated but not signed or ratified, such as those with Japan and Vietnam. The outlook takes account of Russia's import ban on agricultural products and foodstuffs, which is assumed to remain in place until the end of 2018.

Macroeconomic assumptions include a continued low oil price level in the short term but a moderate increase to USD 90 per barrel by 2030. This is a lower level than assumed in previous outlooks. The euro is likely to remain competitive in the short term. In the medium term, we assume that the exchange rate will appreciate moderately, reaching USD 1.23/EUR by 2030. Economic growth in the EU in the short term is expected to be slightly stronger than previously forecasted, just above 2 %. In the medium term (i.e. 2020-2030), we assume an annual growth rate of between 1.5-1.8 %.

The economic outlook takes into account changes in macroeconomic conditions following the UK vote of June 2016, in terms of the economic growth rate and the exchange rate.

Uncertainty analysis and caveats

This outlook for EU agricultural markets and income is based on a specific set of assumptions about the future economic, market and policy environment. The baseline assumes normal weather conditions, steady yield trends and no market disruptions (e.g. from animal or plant disease outbreaks, food safety issues, etc.).

An uncertainty analysis accompanying the baseline quantifies some of the upside and downside risks and provides background on possible variation in the results. In particular, it takes account of the macroeconomic environment and yield variability for the main crops and certain selected scenarios. The scenarios covered in this report include the effect of climate extremes on the EU cereals market, an avian flu pandemic in the EU and exports of skimmed milk powder from India.

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