



EU AGRICULTURAL OUTLOOK

FOR MARKETS AND INCOME
2018-2030

Agriculture
and Rural
Development

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.

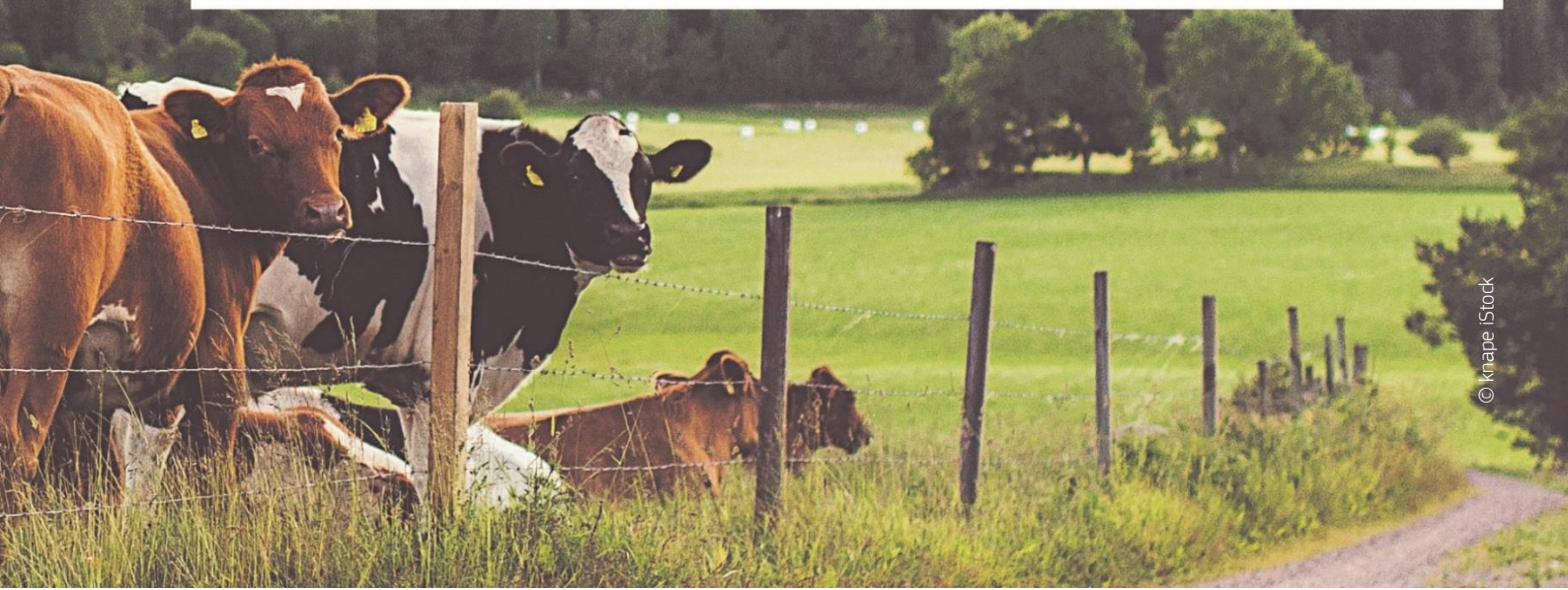
Many drivers will be at play in shaping agricultural markets over the next decade. This outlook tries to identify the impact of consumers' changes which are already apparent today and are expected to further strengthen. In the EU and beyond, the consumer and citizen will become more demanding towards food and its sourcing, its impact on the environment and climate change. For producers these evolving demands mean often higher production costs but also an opportunity to differentiate their products, adding value while reducing negative climatic and environmental impacts. Alternative production systems, such as local, organic or other types of certified production will further excel. At world level, both demand and supply will grow further, creating opportunities and pressures for EU imports and exports, depending on the product and target market.

EU cereal prices are expected to remain fairly stable throughout the outlook period, around EUR 170/t on average. This is due to only moderate growth in demand compensated by production growth on a stable area. Domestic soya bean production will continue to grow albeit from a low level, while also other protein-rich crops will benefit from strong demand and a favourable policy environment. With EU sugar consumption projected to decline, and production expected to stabilize after the end of production quotas in 2017, the EU will continue to be a net sugar exporter.

The livestock sector should benefit from steadily growing global 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. Meat consumption is expected to stabilise before falling slightly. Poultry consumption and exports should continue to increase, while pigmeat production will decline driven by reduced domestic 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, namely stagnating or slightly decreasing domestic consumption of traditional products compensated by growth in new ones and 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. The new Common Agricultural Policy (CAP) proposals have also not been taken into consideration, as they are still under discussion in Council and Parliament.



Overall trends

This outlook, meant to serve as baseline for policy and market analysis and evaluation¹, is based on the existing policy framework and expected trends in the macro-economic environment. Under these assumptions, agriculture will still play a prominent role in the EU's society in 2030, with only a minor decrease in land use and some additional labour outflow. Consumers in the EU and abroad will become more demanding towards the food they consume, giving impetus to adding value (such as local, organic or other certified products) on the one hand and shifts between food categories on the other. Trends towards reduced meat, bread and sugar consumption compensated by increased consumption of plant based proteins exemplify this consumption shift. Pressure from climate change and environmental commitments is going to be compensated only partly by advances in management and technology, such as precision farming, resulting into increasing yields though at a slower pace compared to the past. Most of EU's production will be consumed domestically. The EU will win market shares in some export markets (e.g. for dairy products) while facing additional pressures on the import side for specific products (e.g. beef).

Arable crops

Agriculture remains the primary land use in the EU, despite competition from other uses. Total agricultural land use in the EU is expected to continue its decline, though at a slower pace than in the past decade, to 176 million ha by 2030. In line with this trend, the area of main cereals, permanent grassland and permanent crops are set to further decline in the period to 2030. The amount of land used for other arable crops and oilseeds is stabilising, while land used for fodder is increasing slightly. Although overall agricultural land use is declining, positive yield developments are providing for an overall increase in production.

EU consumption of **sugar** will decline by 5 %, driven by health initiatives and consumer preferences. Sugar is expected to be only partially substituted by an increasing use of isoglucose in processed food, and total sweetener consumption will decrease by 2 %. EU sugar production is expected to be slightly above 19 million t by 2030. The main drivers are a lower yield trend, combined with a decrease in sugar beet area. This level of EU production will allow the EU to remain a net exporter of sugar, in a world market dominated by Brazil.

EU **cereal** production is expected to continue growing to 325 million t by 2030. This growth is driven by a small increase in feed demand (in particular for maize), moderate export prospects and the growing importance of industrial uses. Stronger growth is, however constrained by the limited potential for area expansion and slower yield growth in the EU. Prices are

expected to remain fairly stable at close to EUR 170/t at the end of the outlook period.

For **oilseeds**, given the opportunities and limits of biofuel policy after 2020 and only limited growth in feed demand, no further growth is expected in the rapeseed crop area. The domestic soya bean sector is set to continue expanding, albeit at a slower pace compared to recent few years. Driven by a favourable policy environment, **protein crops** have recently experienced a strong revival. Over the outlook period, strong demand both for feed purposes and for human consumption, as well as the supportive policy environment, will further drive production growth of soya beans and protein crops. This, together with some yield improvements, will lead to a further increase in EU production. However, with a share of only 1.4 % of total crop area, the protein crop area will remain limited.

Demand for **feed** (from arable crops, fodder and pasture) should grow in the outlook period despite mixed trends in animal production. Total feed use should reach 275 million t in 2030 for the three types of compound feed (low, medium and high-protein content). Low-protein feed (mainly wheat and coarse grains) will grow less sharply than the other two. Higher demand for feed from locally-produced, GM-free and organic crops will positively stimulate domestic feed production.

The **biofuels** market, which uses certain agricultural feedstocks, continues to be driven by changes in policy. With the RED II agreement, the biofuel industry now has a clearer framework for adjusting EU production and investing in the necessary production capacity. Due to remaining uncertainties, biofuel production levels are expected to remain stable overall until 2030. Switches in feedstocks may take place, in particular for biodiesel production. Advanced biofuels are also projected to increase. In a context of decreasing fuel use, blending rates may increase significantly.

Milk and dairy products

Growing world import demand driven by population growth (notably in Africa) and income growth will drive higher consumption of dairy products over the outlook period. More focus will be put on added-value products for which the EU has a clear competitive advantage. In addition, consumer preferences for differentiated products (e.g. organic, GM-free, pasture-based, local, etc.) will drive the development of alternatives to conventional production systems. Environmental requirements will also play an increasing role in shaping production systems.

The EU could supply close to 35 % of the global demand increase over the outlook period. EU exports of **cheese**, **butter**, **skimmed milk powder (SMP)**, **whole milk powder** and **whey powder** are expected to grow on average by around 330 000 t of milk equivalent per year (mainly in cheese, whey and SMP).

In parallel, close to 900 000 t of additional **milk** per year would be needed to satisfy the growth in EU domestic use for 'traditional' dairy products (mainly cheese). Alternatively, it can be used to make other products (such as dairy desserts, fat

¹ The 2017-2030 Outlook has been used as baseline for the [impact assessment](#) of the new CAP proposal.

filled powders, infant milk formula, protein and whey concentrates) that can be further exported. By contrast, liquid milk consumption is expected to further decline in the EU.

Increasing global and domestic demand are expected to translate into a rather modest increase in EU milk production, at 0.8 % per year on average, reaching 182 million t by 2030. EU average milk yield is expected to further increase over the outlook period to 8 240 kg/cow, 17 % above the level of 2017. However, this will be at a slower pace than in the past decade, given environmental constraints and the extensification of production in response to consumer expectations.

Meat

By 2030, EU meat production is expected to remain at 48 million t. This will be driven by changes in consumer preferences, export potential, profitability and, for beef, changes in the dairy sector. Although overall EU meat consumption is declining, still 90 % of EU meat production will be consumed domestically.

EU **beef** production has recovered since 2015, after three years of reduced supply following the rebuilding of the dairy herd. However, production is expected to decrease again, influenced by the shrinking cow herd, low profitability, declining beef demand and strong export competition despite the opening of niche markets. Prices are expected to fall in the first part of the projection period before stabilising towards 2030.

After several years of stabilisation, EU **sheep** and **goat** meat production is expected to recover slightly. This is due to improved returns for producers, maintenance of coupled support and sustained domestic demand.

As EU **pigmeat** consumption declines in the outlook period, additional quantities are expected to be shipped to world markets, mostly China, despite fierce competition from the US and Brazil.

Poultry meat is the only meat for which both EU production and consumption are expected to expand significantly over the outlook period (both by around 4 % between 2018 and 2030). Supported by continued growth of global demand, the EU will increase its exports thanks to the valorisation of different cuts of poultry meat and offal and a wide portfolio of destinations.

Specialised crops

Growing production and processing capacity in the EU **olive oil** sector is expected to further strengthen the EU net export position. Increasing consumption outside Spain, Italy, Greece and Portugal should offset the consumption loss in these countries over the outlook period.

EU total **wine** production and domestic use are expected to stabilise after a previous decade of decrease. Over the outlook period, some slight reduction in human consumption in the EU of wines and products prepared through distillation such as brandies is expected. The EU should maintain steady export

growth, driven in particular by geographical indication and sparkling wines.

A reduction in production area combined with increasing yields is expected to lead to the stabilisation of **apple** production in the EU. The consumption of fresh apples should stabilise, while the consumption of processed apples is likely to decline slightly.

The consumption of fresh **peaches** and **nectarines** is expected to decrease slightly due to competition from other summer fruits. A reduction in production area is expected to lead to a slight decline in EU production.

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.

Agricultural income

This market outlook also analyses how the market trends, given current assumptions and including sectors not explicitly covered by this outlook, would translate into farmers' income. The analysis shows a stabilisation of agricultural income per labour unit in real terms throughout the outlook period. This can be explained by a significant increase of the agricultural value of production (+17 % over the period) in nominal terms outweighed by a similar increase in production costs, stemming mainly from higher energy prices and stronger depreciation. The continued labour outflow from agriculture due to structural changes at EU level is also playing a significant role.

Environmental and climate aspects

This report also discusses the market outlook's expected impact on certain climate and environmental indicators such as those for emissions of greenhouse gases and air pollutants and the nitrogen surplus. The presented analysis is likely to be an overestimation of the agricultural pressure on climate and environment as the models used cannot fully capture the beneficial effects of certain CAP measures in place and farmers' changing management practices.

Changes in the livestock sector will have a major impact on the level of greenhouse gases emissions. This is because most **emissions** of greenhouse gases in agriculture stem directly or indirectly from animal production. The projected decrease in total EU livestock numbers by 2030 will thus contribute to a decrease in emissions. Meanwhile, higher crop production and manure application will contribute to an increase. As a result, compared with 2012, greenhouse gases are not expected to go down while ammonia emissions will decrease by 9 %.

In 2030, the projected total **nitrogen (N) losses to water** in the EU will be 8 % lower than in 2012. This is due to the expected productivity gains in (1) the dairy sector, with less manure produced and (2) the crop sector, with less N inputs per N outputs. However, the total increase in mineral fertiliser will lead to an increase in runoff (+3 %).

Nitrogen pressure is one of the driving factors affecting **plant biodiversity** in agricultural areas. Initial results of a preliminary analysis show that EU agricultural grasslands reach average levels close to 25 % of potential plant species richness due to nitrogen pressure. The average change in 2012-2030 for the EU is very small, at +2 % of potential plant species richness.

Soil erosion by water is considered to be the most significant land degradation process. Erosion rates are still higher than soil formation rates. Soil erosion rates in agricultural lands are not expected to change significantly by 2030. This is because of marginal overall changes in crop distribution in the EU.

This outlook also contains an agro-economic analysis of climate change impacts in Europe and a review of the effects of organic farming on climate change.

Main assumptions

The outlook presented in this report assumes:

- a continuation of current agricultural and trade policies;
- a continuation of current climatic trends (excluding extreme events); and
- no market disruptions (due for example to animal diseases or trade bans).

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 for implementing it. However, the level of aggregation of the model does not allow all details to be modelled. The impacts of the Agricultural Omnibus package on the CAP have been taken into consideration based on expert judgement.

Only free-trade agreements that are already in place are taken into account. This means that the agreements with Canada and with the Southern African Development Community and the update of the agreement with Ukraine are included. Other trade agreements that have been negotiated but not signed or ratified, such as those with Japan and Vietnam, are not taken into account. The outlook takes account of Russia's import ban on agricultural products and foodstuffs, which is expected to remain in place until the end of 2019.

Current climatic trends, such as a slight increase in average temperature, are expected to continue over the outlook period. The resulting production changes have been considered through expert judgement. More specifically, crop and milk yields are

expected to grow below trend given the climatic pressure. However, extreme events are not accounted for. For these we refer to the uncertainty analysis as well as the specific scenario in last year's 2017-2030 Outlook.

Macroeconomic assumptions include an annual average Brent crude oil price of between USD 80-85 per barrel for the period 2022-2027, landing at USD 92 per barrel in 2030. 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 1.20/EUR by 2030. Economic growth in the EU in the short term is expected at around 1.7 %. In the medium term (i.e. 2020-2030), we assume an annual growth rate at around 1.5 %.

The economic outlook takes into account changes in macroeconomic conditions originating from the UK vote of June 2016 and the subsequent withdrawal negotiations, in terms of the economic growth rate and the exchange rate. Although the withdrawal proposal currently on the table indicates a continuation of the close relationship between the UK and the rest of the EU, which would mean only minor deviations from this EU outlook in the near future, no assumptions are made as to the final withdrawal agreement or the resulting macroeconomic consequences, as at the time of this report going to press, the UK parliament still has to cast its vote.

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 variability in the macroeconomic environment and yield for the main crops and certain selected scenarios.

The scenarios covered in this report include:

- the potential market impacts of Chinese retaliatory tariffs on US soya bean and pigmeat imports;
- drivers for protein-rich crop development in the EU; and
- the market and non-market impacts of EU household food waste reductions.

DISCLAIMER:

While all efforts are made to reach sound market and income prospects, uncertainties remain.
This publication does not necessarily reflect the official opinion of the European Commission.

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