EU AGRICULTURAL OUTLOOK

FOR MARKETS, INCOME AND ENVIRONMENT 2022 - 2032

Executive Summary

Agriculture and Rural Development

Manuscript completed in December 2022

Luxembourg: Publications Office of the European Union, 2022

PDF ISBN 978-92-76-58589-3 ISSN 2600-0628 doi 10.2762/29222 KF-AQ-23-001-EN-N

While all efforts are made to provide sound market and income projections, uncertainties remain.

The contents of this publication do not necessarily reflect the position or opinion of the European Commission.

Contact: DG Agriculture and Rural Development, Analysis and Outlook Unit

Email: agri-outlook@ec.europa.eu

https://agriculture.ec.europa.eu/data-and-analysis/markets/outlook/medium-term_en

Please cite this publication as: EC (2022), EU agricultural outlook for markets, income and environment, 2022-2032. European Commission, DG Agriculture and Rural Development, Brussels.

EXECUTIVE SUMMARY

Main assumptions

This outlook report covers the period until 2032 and reflects agricultural and trade policies in place in November 2022. Global projections are based on the OECD-FAO Agricultural Outlook 2022-2031 updated with the most recent macroeconomic and market data.

This annual report was prepared in a significantly changing environment. In early 2022, the **post-COVID recovery** led to supply and trade disruptions and increasing commodity prices and input costs. New severe shocks came with the **Russian invasion of Ukraine**, bringing further **uncertainties to agricultural markets and global food security**. All this came on top of changes observed due to disruptive weather events related to climate change, and animal disease outbreaks.

Against the backdrop of these challenges, the report takes the most plausible macroeconomic assumptions for the 2022-2032 period. Overall, macroeconomic developments are causing a lot of uncertainty. **Energy prices** have been significantly revised upwards compared to previous outlooks, because of the war in Ukraine, the EU sanctions against Russia and the need for the EU to find alternative supplies. **Inflationary pressure** is growing because of high energy prices and the increasing cost of raw materials, which affect food prices and household spending, most notably in the near future. These short-term impacts are likely to affect the magnitude and direction of consumption pattern changes also in the medium term. **Disruptions in international trade** due to the Ukraine war are assumed to continue. There is no clear view on its duration and its future consequences. Moreover, macroeconomic assumptions foresee a change in exchange rate developments: in the short term, the **euro** is due to remain weaker against the US dollar than in recent past, being close to parity. This has implications for EU exports (which gain in competitiveness) and imports (especially of inputs, which are due to become more expensive). In the medium term, the euro is expected to appreciate back to its level of last years. The EU **population growth** in 2022 reflects an inflow of people fleeing from Ukraine and follows a declining trend in the medium term.

As macroeconomic projections and crop yield expectations are by nature uncertain, a systemic **uncertainty analysis** has been carried out, which enables us to illustrate possible developments caused by the uncertain conditions in the economy and agricultural markets. This report includes possible price ranges around the expected baseline.

In line with the methodology used for this annual exercise, only implemented policy changes are incorporated in the report. **CAP strategic plans** of individual EU countries and possible ensuing market developments are considered, assuming that this new policy setting will remain in place until 2032. Considerations and implications based on CAP specific objectives are made, in addition to broader changes related to implementing sustainable production methods, reduced energy dependency, reinforced sector resilience, and changing diets.

Overall, sustainable growth remains a key factor affecting future developments in EU agriculture. Measures stemming from **the Farm to Fork and Biodiversity strategies** are taken into account when corresponding legislation is approved and implemented. Otherwise, the direction of change related to these measures is only considered to the extent observable so far in individual markets.

Similarly, **free trade agreements** (FTAs) are included only if they have entered into force. No new FTA has been added compared to last year, as the agreement-in-principle with New Zealand remains to be approved, although the temporary trade liberalisation with Ukraine, in place until June 2023, is reflected. On the other hand, the relationship between the EU-27 and the UK is based on the **EU-UK Trade and Cooperation Agreement** provisionally applied from 1 January 2021; a duty-free/quota-free trading relationship is assumed. WTO **tariff-rate quotas** have been recalculated following their apportionment between the EU-27 and the UK respectively.

In recent decades, the EU was able to steadily increase **agricultural productivity**, and thereby production. A significant role in this was played by Member States that joined the EU after 2004 where structural investment, thanks to EU funding, has boosted crop and milk yields. This may be seen as a transition following decades of underinvestment in these countries. Looking at the next decade in this report, key productivity parameters seem to enter a new phase:

- **crop yield** growth is now due to slow down and production level to stagnate, for a series of reasons including climate change and weather-related events, lower use of plant protection products and synthetic fertilisers, limited access to gene-editing and a slowdown of possible genetic improvements.
- **milk production** growth that has been robust since the end of the milk production quotas may significantly slow down and turn even slightly negative, as the herd number reduction may not be compensated anymore by the milk yield increase.

On the consumption side, **meat consumption** is expected to decline. This is another reversing trend, which is supported by a continuing decline in beef and pigmeat consumption, and a sign of diet change in the EU. However, in the rest of the world meat demand continues expanding, driven by population and income growth.

These evolutions in production and consumption seem to point into the same direction, as a turning point in trends, a possible *Zeitenwende*, with an agri-food system ensuring food security in a more sustainable manner.

Land use

The total **EU agricultural area** is projected to remain stable. Pasture areas and arable land are expected to decline marginally. Within the latter, only the area under protein crops is due to grow, while the cereal and oilseed areas are forecast to decline. Moreover, the area of olives for oil is expected to grow in line with past trends. Following the rules in the new CAP, fallow land is due to increase slightly. Likewise, the share of land under organic farming will further increase, benefiting from public support that should partly offset market factors such as the protracted implications of the current food price inflation.

Arable crops

The total EU **cereal** area is projected to decrease marginally to 57.2 million ha by 2032, driven by a decrease in barley and maize, and an increase in wheat. Yields of barley and wheat are expected to stagnate, with a slight decrease for the former and a slight increase for the latter. Meanwhile, maize yields may still increase due to yield improvements in eastern EU countries. This is due to translate into a decrease of 1.1 million t below the 2020-2022 average production of cereals (308 million t). Domestic use is expected to decrease, even with an increase in human consumption (+3.9 % compared to 2020-2022), due to lower animal production and feed use (-6.1 %). On the trade side, the EU will remain competitive but face strong competition from other key global actors. It will remain a net exporter of wheat and barley and a net importer of maize and rice.

The report also includes **a scenario on how extreme weather events** impact yields of the main crops (wheat and maize) and so the respective markets. The results show how exports and imports act as a buffer to the effect of concurrent extremes (i.e. happening once, at the same time, over a large area) as they improve the availability of commodities domestically. Due to the impossibility of substituting the commodities within the EU market when there are concurrent shocks, the EU becomes a net importer of wheat. In the case of recurrent extremes (i.e. happening repeatedly over time in the same area), market disruptions are potentially larger for commodities in which the EU has a stronger trade position, such as wheat.

The EU **oilseed** area is due to fall to 11.0 million ha, a slight decrease compared to current levels. The areas used for rapeseed and sunflower production are expected to decline, but this reduction is counterbalanced by an increase in the areas for soya beans and pulses. Average oilseed yields are due to continue to increase. Given an expanding area and increasing yields, EU oilseed production is projected to be 32.9 million t in 2032 (30.2 million t in 2020-2022). Production of pulses (+54.7 %) and soya beans (+33.3 %) are expected to increase the most. The EU is due to remain a net importer of oilseeds, but imports are expected to decline. Likewise, the EU will import less pulses and may become largely self-sufficient. While human consumption of pulses is expected to increase markedly, feed will remain their main use.

Oilseed crushing volumes are expected to decrease marginally (-0.8 %), and its composition will also change slightly: rapeseed and soya beans will decline, and the use of sunflower seeds will increase. Internal demand for **oilseed meals** is due to diminish because of its lower use for animal feed. The EU demand for **vegetable oils** is due to decline too, driven by lower biodiesel demand and the consumption of oils different than of oilseed origin. Likewise, food consumption of vegetable oils is expected to change its composition, with a large increase in sunflower oil and a large decrease in palm oil. Olive oil consumption is due to continue growing, especially outside the main producing countries (Spain, Italy, Greece, Portugal). In addition, imports of vegetable oil are expected to decline, driven by a reduction of **palm oil** imports (from 6 million t in 2020-2022 to 3.3 in 2032) that more than compensates the increase in sunflower oil imports (from 1.1 million t to 2 million t).

Projections for the **oilseeds market** in selected EU countries (Germany, France, Poland, Romania, Bulgaria and Hungary) foresee an area increase in Germany, France and Poland, given the relatively higher prices compared to cereals. Sunflower seed production is expected to grow the strongest, while rapeseed production in Germany and France is likely to sustain its high levels. The crushing capacities in these two countries are not likely to grow due to low margins and declining demand for oils and meals. The opposite trend is expected for Hungary. More strongly increasing production than domestic demand in Romania, Bulgaria and Hungary will lead to increasing net exports. Soya bean meal is expected to be a preferred feedstock (except in Germany). The demand for vegetable oils could slightly grow as well as trade, following changes in supply and demand patterns.

Demand for **feed** from arable crops is projected to decrease by -4.7 % by 2032 due to the decline in EU pig, beef, and dairy herds. Likewise, the shift to grass-based production systems, driven by an increase in organic dairy production and further extensification, will strengthen this trend. High and low protein feed use are set to decline, but medium-protein feed might increase.

The EU **sugar** area will slowly decrease to 1.45 million ha, as some growers switch to other crops in view of the challenges posed by plant protein products available for sugar beet. Combined with stable yields, EU sugar production could be reduced to 15.5 million t. Domestic sugar consumption will decline faster than production. This could allow EU sugar exports to grow and, by 2032, they are expected to reach the level of imports.

In the medium term, **biofuel** demand follows the trends in road transport fuel use. Biodiesel use is expected to stay relatively stable, while bioethanol use is due to increase by 2030 (+13 % compared to 2022) before declining in 2032. Maize will remain the main feedstock for ethanol production, but its share is expected to decline.

Milk and dairy products

The shift to more sustainable EU milk production will translate into an extended adoption of sustainable farming practices, sustained high quality standards and increased differentiation of production systems. Alternative systems, like organic, are expected to grow and gain greater market share. Environmental concerns will reduce the size of the dairy herd further, mostly in intensive production systems. While animal welfare and more efficient feeding strategies may contribute to still increasing yields, they may not offset the reduction of the dairy herd. This could lead to a decline in EU milk production by 0.2 % per year by 2032.

Despite the slowdown in milk production growth in the EU, it will remain the largest global dairy supplier (24 % of the global dairy trade in 2032). However, global dairy exports are expected to be reduced, as many traditional importers will improve their self-sufficiency. Also, the volume growth recorded in the past will be hard to improve. This will lead to lower growth for the trade in milk powders especially. On the other hand, new trends like premiumisation and the increasing role of foodservice are likely to push the sector towards exports of high-quality products.

The reduction in EU milk production will not lead to a proportionally lower milk processing capacity, as protein and fat content could improve. **Cheese** and whey production will benefit most from the milk produced. Meanwhile, due to increasing competition, whole milk powder production and some applications of dairy solids are likely to decline.

Nutritional aspects and functionality will drive EU dairy demand. Consumer preferences will increase the consumption of certain products, such as those with less fat and sugar, and fortified or functional dairy products. The growth in EU consumption of **cheese** could remain relatively modest and expanding production could be supported by rising exports. The EU will keep its position in the global trade of whey powders, mainly growing in food uses. Meanwhile, EU exports of skimmed milk powder will remain at a comparable level to 2020-2022, and the low competitiveness of EU whole milk powder could lead to reduced EU exports.

By 2032, EU cheese and whey powder prices are due to increase the most relative to their already high 2020-2022 value (0.7 % and 2.4 % per year, respectively). Butter will reach a comparable level to its current price. As a result, the EU raw milk price is expected to be around EUR 45/t by 2032.

Meat products

Global meat consumption is expected to continue growing. A large share of demand will be met by domestic production, but 1.8 million t of poultry meat and 1.3 million t of beef will come from increased imports. The EU will be benefitting only to a limited extent, mainly for poultry meat.

Sustainability will play an increasingly prominent role in EU **meat markets**. Meat production will be more efficient and more environmentally friendly. The spread of animal diseases and market opening through free-trade agreements both will be important factors of change, though with opposite effects. On the other hand, consumers' concerns about the environment and their health, as well as convenience trends, will shape meat consumption, leading overall to a slight decline to 66 kg per capita by 2032 (-1.5 kg per capita). The composition of the meat basket is also expected to change, with a more significant reduction in beef and a substitution of pig meat by poultry.

Following the decline in the EU cow herd (-9.1 %), production of **beef** is also expected to fall. EU beef consumption is due to decline by 0.8 kg per capita by 2032. Meat export opportunities may improve in the medium term but will be offset by a decline in live animal exports due to increased competition and animal welfare concerns over long-distance transport. EU beef imports will slowly increase to pre-COVID levels. Prices are expected to come down and stabilise at EUR 4000/t by 2032.

EU **pigmeat** consumption is due to decrease by 0.4 % per year (or -1.3 kg per capita) by 2032, due to health, environmental and social concerns. Likewise, China's production capacity is projected to recover sooner than expected, with a massive impact on EU exports to Asia. These two factors, together with lasting effects of African swine fever, will lead to a reduction of 1 % in EU pigmeat production. Prices should go down until 2025, when they should stabilise around EUR 1500/t.

EU **poultry** production and consumption are expected to continue growing by 0.2 % per year, slower growth than in the past decade due to environmental restrictions and concerns, as well as changes in consumption (less meat). Exports will also recover by 0.8 % per year, thanks to increasing demand in Sub-Saharan Africa, the Philippines, and the UK. The poultry price is expected to decrease and stabilise around EUR 2000/t by 2032, above pre-COVID levels.

EU production of **sheep** and **goat** meat is projected to increase slightly by 0.2 % per year. Consumption is expected to remain stable at 1.3 kg per capita by 2032. Exports of live animals will decline, mainly due to financial risks and animal welfare concerns, which can be impactful in anticipation of possible regulatory changes. Exports of meat are expected to catch up due to consolidation of trade with partners in the Near and Middle East. Exports to the UK, representing half of EU meat exports, will remain stable. Likewise, imports will recover in the

short term and decline slightly over the medium term. Prices are due to follow a downward shift but reach a level higher than before COVID-19.

Food security

High EU self-sufficiency rates across agricultural products derive from favourable natural conditions, diversity of territories and climate, and the competitive EU position relative to some other global suppliers. This also reflects the cumulative results of the CAP over the years, while food security is a core goal of the EU Treaty.

In the next 10 years, the EU is expected to remain self-sufficient in wheat and barley, while for maize, favourable world prices are likely to favour imports over domestic production growth. Historically, the EU has low self-sufficiency rates in oilseeds. However, the expected increase in feed demand for GM-free meals, relatively higher profitability compared to cereals and reinforced crop rotation are likely to push the production of oilseeds up, resulting in a higher EU self-sufficiency, especially in soya beans.

EU self-sufficiency rates are above 100 % overall for animal products and these rates are likely to persist, despite some reduction in EU because consumption is also expected to decline (especially in meats) and export growth could also fall.

The EU is due to reinforce its positive net trade position (+21 % increase in net trade compared to 2022), with exports of high-value food products, beverages, and dairy more than compensating for imports of commodities such as vegetable oils and animal feed. At the same time, EU exports will remain well-diversified while diversification of EU imports may be reduced, but without significant exposure to a large concentration of suppliers.

Average food expenditure at household level is expected to decrease by 2 percentage points in 2030 compared to 2020 (20 %), which is a record level. Over the medium term, greater convergence is likely between EU-13 and EU-14 countries. Nevertheless, these projections have to be considered with special caution, against the backdrop of uncertainties about broader socio-economic impacts of crises (such as changes in livelihoods, growing inequalities).

Agricultural income and labour

Overall, the **value of EU agricultural production** is expected to grow slightly, with the value of crop and animal production projected to return to levels similar to 2019, from 2025 onwards. Regarding input costs, energy and fertiliser costs are due to remain higher than in the past in the short and medium term, although the uptake of renewable energy, more diversification of energy supplies, more energy-efficient practices and better-targeted fertiliser use are expected to reduce the economic impact of these costs for farmers.

Total farm income adjusted for inflation is expected to remain at a comparable level to 2010-2012, but below a peak seen in 2022 due to high agricultural prices. The real income per worker, considering a slower but continuing shrinking in the labour force in the next 10 years, is expected to increase by 1.1 % per year between 2012 and 2032.

Based on the latest Farm Structure Survey (census year 2020), there were 9.1 million farms in the EU (25 % below the 2010 figure). At the same time, the number of large farms (above 100 ha) increased by 14 % and they cultivated around 50 % of utilised agricultural area. Around 80 % of EU farms are specialised, with field crops accounting for one third while livestock specialized farms showed the sharpest decline (-40 %).

Environmental scenario on lower livestock density

This report presents a scenario analysis of potential impacts of a lower livestock density per ha of utilised agricultural area, inspired by ongoing discussions in some EU countries. Additionally, livestock density may be among the options to reach the Farm to Fork target regarding a 50 % reduction of nutrient losses.

A set of scenarios has been considered, simulating livestock density thresholds of 2 and 1.4 livestock unit per ha in all EU countries in 2030, which would affect current hotspot regions with high density. Likewise, the effects of a feed additive for the reduction of methane emissions are also included.

The analysis quantifies the environmental benefits and the economic impact of a lower livestock density. It would lead to a significant drop of greenhouse gas emissions in the EU (although offset by a leakage effect in other parts of the world). Livestock density reduction in hotspot areas can also reduce the EU average ammonia emissions from agriculture up to 11 % and average nitrate pollution per hectare up to 12 %. Reductions would be much more significant in hotspots regions, up to 50-60 % in some of them.

As regards the economic impact of the scenarios, a general increase in prices of animal products can be observed, due to a lower supply, with producer price increases highest for pigmeat, eggs and beef. By contrast, crop producer prices, in particular feed crops, will decrease on average, driven by the lower demand for animal feed. In terms of EU production, reductions are most significant for meats and eggs, while remain limited for dairy. Regarding impacts on trade, EU exports of poultry and pigmeat are the ones declining most.

FINDING INFORMATION ABOUT THE EU

Online

Information about the European Union in all the official languages of the EU is available on the Europa website at: https://europa.eu/european-union/index_en

EU publications

You can download or order free and priced EU publications from: https://publications.europa.eu/en/publications.

Multiple copies of free publications may be obtained by contacting Europe Direct or your local information centre

KF-AO-23-001-EN-N

Twitter: @EUAgri

https://ec.europa.eu/agri-outlook

#AgriOutlook

Publications Office
of the European Union

ISBN 978-92-76-58589-3