

Research for AGRI Committee – The dependency of the EU's food system on inputs and their sources



While the European Union (EU) is a key global producer of agricultural commodities and has a positive agricultural trade balance, it is dependent on the import of some key commodities. However, recent shocks to the global markets following the COVID-19 pandemic and the Russian invasion of Ukraine have highlighted the risks of increasing economic efficiency at the expense of resilience and food security. They have also impacted the EU's food production sector's prices, supply chains and logistics.

The availability of food in the EU is not generally considered to be at risk but these price increases and the related market disruptions have highlighted the fact that **the EU food system is dependent on some inputs which, in some cases, originate from a limited number of third-country suppliers.**

Against this background, the European Parliament (EP), in its [resolution of 24 March 2022](#) on 'The need for an urgent EU action plan to ensure food security inside and outside the EU in light of the Russian invasion of Ukraine' expressed its will to commission "a comprehensive study on the dependence of the EU's food system on inputs and their sources" (point 56 of the resolution).

The present document is the executive summary of the study commanded for the AGRI committee on "The dependency of the EU's food system on inputs and their sources". The full study, which is available in English can be downloaded at: <https://bit.ly/3lfPyjy>

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In its [2022 own initiative report](#) on 'Ensuring food security and long-term resilience of the EU agriculture', the EP has also highlighted the need for the EU to strengthen its food security and the resilience of its agricultural sector and its entire supply chain by reducing its dependence on imports from third countries and diversifying the supply of critical imported products such as fertilisers, animal feed and raw materials.

The study relies on a **mixed approach** combining the analysis of quantitative evidence (mostly from official sources) with qualitative evidence and insights gathered through literature review and interviews with key institutional and sectoral stakeholders. The methods used in the study are theoretical, qualitative and quantitative analysis, the latter also including a quantification of the dependency of the EU food system on imported inputs.

Vulnerabilities of the EU food system regarding inputs

- **The total sector's dependency ratios for imported inputs** [*imported inputs/total sectoral output*], **in value, are generally below 10 %** for the core components of the EU's food system (i.e. the "agriculture", "fisheries and aquaculture" and "food and beverages" sectors). In agriculture, this ratio is 7.7 %.
- However, **when expressed as a share of the total inputs used by these three core components of the food system, the value of imported inputs points to a heavy reliance on imports, with significantly higher import dependency ratios** [*value of imported input/total input value*] **for the selected inputs** (ranging for instance from 11.06 % to 66.71 % for the inputs to the agricultural sector). The same applies for the **geographical concentration of imports**, measured as the *aggregated % share of the top-4 suppliers, which is relatively low at aggregate level (with a combined share lower than 40 % in 2019 for the top-4 suppliers) but significantly higher for individual input groups* (e.g. for soya beans, soya bean meals, phosphates, potash, where the top two suppliers' market share reaches 50 to 85 %).
- **Dependency on imported inputs is particularly significant for animal products** (soya beans and meal are feed materials of critical importance to this subsector and to poultry and pig farming in particular, and their imports are characterised by the strongest polarisation towards few non-EU suppliers) and **cereals** (which depend on imported raw materials and energy sources needed to produce fertilisers).
- **Recent developments reflect the degree of integration of the EU food supply chain into the global supply chain and, just as for EU industry, the cross-sectoral risks associated with global supply chains:** the COVID-19 pandemic, the Russian invasion of Ukraine and disruptions in logistics (notably for maritime transportation) and the related higher price volatility recently amplified the negative implications of an high import dependency for key inputs.

Available tools to secure inputs and make the EU less dependent on foreign suppliers

- **The EU has considerable interest in supporting trade relations** to ensure that the EU's resilience in the face of trade shocks is not compromised, as EU foreign trade accounts for 30 % of EU GDP. Trade openness is key to improve resilience and avoid bottlenecks and vulnerabilities due to excessive dependence on a limited number of trade partners.

- The **EU's trade policy, free trade agreements and strategic partnerships with third countries facilitate access to a diverse range of inputs** from outside the EU, notably for key products where the EU has an input dependency. Tariffs are a key tool to facilitate smoother trade flows and improving access to inputs for EU farmers (e.g. for protein-rich feed and fertilisers).
- **Recent policies developed under the European Green Deal have raised sustainability ambitions for agriculture and food systems.** The EU's climate ambition is likely to impact in particular the EU's fertiliser sector and its imported inputs through the revised [Renewable Energy Directive](#) (RED), the [Emission Trading Scheme](#) (ETS) and the [Carbon Border Adjustment Mechanism](#) (CBAM).
- The **Farm to Fork Strategy aims to contribute to the EU's input autonomy by 2030** through a targeted 50 % reduction in nutrient losses (which should lead to a reduction of 20 % in the use of fertilisers), a target of 25 % of agricultural land under organic production, the development of alternative sources of proteins for animal feed (in the framework of the European protein strategy), the promotion of the bio-economy and shorter supply chains.
- **The Common Agricultural Policy (CAP) national strategic plans have also the potential to reduce the EU's import dependency,** notably through support to low-input practices, nutrient management, sustainable fertilisers and organic farming and the possibility for Member States to grant increased coupled support to protein crops. As highlighted by several stakeholders, there is however also a risk that the EU Green Deal and the adoption of sustainable practices under the CAP could reduce the production capacity of EU agriculture and thereby weaken the EU's self-sufficiency in food.
- **Emergency measures recently adopted at EU and Member State level** proved useful to mitigate the impact of increased inputs costs following the war in Ukraine.

Recommendations to increase the EU food sector's resilience to disruptions in trade flows and price increases of imported inputs, and to reduce the dependency of EU agriculture on imported inputs

- **There are a number of available tools to address instability in the imported inputs' markets and diversify input sources,** including trade and strategic partnerships, a renewed enlargement agenda and the opportunities offered by Ukraine's production capacities during the transition phase, strategic stockpiling and financial instruments (derivatives) and long-term contracts.
- **Available options to increase domestic production of key inputs** include research, technological development and innovation in EU agriculture to achieve a more efficient use of natural resources, raw materials and farming inputs, to improve crop productivity without using input-intensive techniques and to fully exploit the potential offered by bio-based, fully circular production processes.
- **Changes in consumption patterns could reduce the EU's food sector's input dependency,** notably through a reduction of animal products in people's diets to reduce third countries' feed imports, as well as consumer preferences for more sustainably produced products.

- **To improve the capacity of the EU food system to cope with structural changes and increased input dependency, the research team recommends to:**
 - *Diversify input sources and trade partners* (finalisation of new free trade agreements and strategic partnerships, use of custom tariffs and preferential conditions for imports).
 - *Address market instability* (analyse the feasibility and relevance of strategic stockpiling and financial instruments to hedge risks linked to price volatility).
 - *Avoid disruptions in logistics* (keep vital traffic lanes open, promote the completion of some of the EU's [Trans-European Transport Network](#) corridors).
 - *Reduce input dependency through domestic production, research and innovation* (increase domestic production of key inputs, support precision farming).
 - *Use the CAP toolbox to increase self-sufficiency and promote risk-management tools* (support low-input practices through the CAP's national strategic plans, reduce the need for imported feed materials and expand protein crops, promote a wider uptake and an improvement in the effectiveness of insurance, mutual funds and risk management schemes).
 - *Improve transparency and monitoring of the EU's input dependency.*

Further information

This executive summary is available in the following languages: English, French, German, Italian and Spanish. The study, which is available in English, and the summaries can be downloaded at: <https://bit.ly/3lfPyjy>

More information on Policy Department research for AGRI: <https://research4committees.blog/agri/>

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