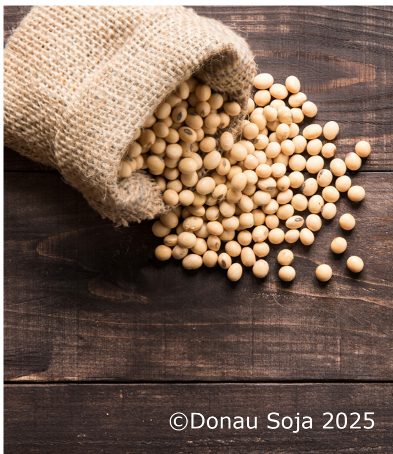
Donau Soja
POSITION PAPER









EUROPE NEEDS AN EFFECTIVE AND HOLISTIC PROTEIN STRATEGY

Commissioner Hansen's February 2025 Vision for Agriculture and Food[1] aspires to an agri-food sector operating within planetary boundaries and serving a One Health approach. It highlights the risks of Europe's dependence on imported soya (currently around 32 million tonnes of soybean equivalent per year) and stresses that we need a more self-sufficient and sustainable approach to protein consumption and production. This is a significant step forward. The purpose of this position paper is to set out Donau Soja's expectations for a European protein strategy arising from this vision. It has two parts: a presentation of considerations for leading a protein transition that restores balance in Europe's protein economy, and an explanation of why a protein transition is necessary.

LEADING THE TRANSITION

We argue that it is now time for an effective and holistic European protein strategy. This must take a systems approach that considers all aspects of protein sourcing and use holistically. A serious strategy needs to include a commitment to a clear budget allocated to financing measures. The overall goal must be to significantly reduce the EU protein deficit while actively supporting sustainable and healthy diets. Efforts to increase plant protein production and the efficiency of plant protein use to support sustainable and healthy diets are central.

Soybean is the most protein-productive crop that grows well in Europe. Globally, six out of the top ten annual soybean yields at country level are recorded in Europe. Climate warming in Europe is likely to improve soybean competitiveness on most European farms. The other major legume protein crops (pea and faba bean) also grow well in Europe. However, autumn-sown cereals are exceptionally productive and thus favoured on many European farms. European farmers use imports of plant protein (particularly soya) to complement the high levels of carbohydrate produced from cereals to feed a large animal population. Therefore, an agri-food systems approach is needed if we are to seriously address the resulting deficit in plant protein production. This must include more direct policy action to rebalance the EU's agri-food system.

Restoring balance

Sustainably developing our food system involves restoring balance. We need more balance in the policy debate on how our food choices impact the world and our health. We need a better balance between the protein we import, the protein we produce, and the protein we and our animals consume. We also need a better balance between the nitrogen that farmers apply as fertiliser and the nitrogen in the protein we consume. To protect the climate, we need to balance the emission and absorption of greenhouse gases. And all this must occur while maintaining the competitiveness of farming businesses, restoring nature, and protecting habitats.

Restoring balance in public policy and debate

Donau Soja is clear: the current push-back against agri-environmental progress is a mistake. The war in Ukraine has been used to justify sidelining environmental progress. The future of European agriculture lies in high environmental standards which reflect regional realities and variations. In particular, we need smarter regulation that focuses on basic agri-environmental processes using metrics that leave local action in the hands of local decision makers. Policy needs to actively support food system change. We need more clarity in public debate about the links between protein consumption, production, imports, environmental and climate impacts, and our food security. The scientific facts about protein, its links to land use and the nitrogen cycle, provide clarity and the foundations for consensus building.

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[1] European Commission 2025. A Vision for Agriculture and Food. https://agriculture.ec.europa.eu/overview-vision-agriculture-food/vision-agriculture-and-food_en

Integrating policy to balance societal goals

The compartmentalisation of policy responsibilities at all levels (European, national, and regional) is creating major challenges. In accordance with the European Commission's Vision[2], we need policy integration in the space between agriculture, public health and environment ('One Health'). We believe a holistic understanding of the sourcing, conversion and consumption of protein can help provide the framework for this integration, as well as opportunities to deregulate farming while supporting environmental outcomes. The Farm to Fork Strategy marked a step forward by acknowledging the link between health and agriculture. However, policies must now reduce the regulatory burden on farmers without putting environmental progress at stake. Agriculture is more than farming, and the Common Agricultural Policy needs to evolve into a policy for sustainable agri-food systems. The National Strategic Plans in particular need to be extended, to become plans for sustainable agri-food systems. The key to deregulation while maintaining standards is to focus on outcomes instead of activities and inputs. The adoption of a lighter regulatory approach requires progress to be monitored in terms of outcomes. Metrics related to protein can provide a basis for measuring and monitoring progress.

Establishing an agri-food system and protein observatory

There is an urgent need for system-wide agri-food indicators that link consumption to key agri-food processes, especially land use and the nitrogen cycle. An agri-food system observatory focused on protein could track complete protein balances at EU and member state levels, using existing data to monitor changes in production and consumption relative to dietary guidelines. These balances could also incorporate nitrogen parameters. As with energy and carbon monitoring, tracking protein and nitrogen flows provides powerful insights into whole-system performance and policy impacts. These indicators are intended not to enforce uniform targets, but to focus attention on the consumption, sourcing, and production of protein, grounded in core scientific processes. They could be used to extend Common Agricultural Policy (CAP) indicators to measurements of whole agri-food system performance, in line with the One Health approach. Existing data on nitrogen and protein flows through food systems can provide robust, holistic indicators that span agricultural, environmental, and public health policy domains. They can inform assessments of National Strategic Plans by capturing changes relevant to agricultural, environmental and health policies.

Restoring balance in consumption

Diets are changing as more people recognise that healthy eating is often also beneficial for the environment. But addressing the link between diet, health and environment remains a difficult policy area. A reluctance to influence food choices is understandable. At the very least the differences in value-added tax that penalise healthy sustainable choices must be eliminated. Instead, these healthy, sustainable food choices should be actively supported by taxation. We see how focusing on protein can help lift the debate above the personal by relying on scientific principles and facts. National food supply data indicate that consumption of animal-sourced foods in excess of public

[2] European Commission 2025. A Vision for Agriculture and Food. https://agriculture.ec.europa.eu/overview-vision-agriculture-food/vision-agriculture-and-food_en

food-based dietary guidelines is very common. However, these average per-capita supply data say little about the extent of misalignment. We need more information about the distribution of food consumption patterns in populations so that we can better understand the under and over-consumption of different food types. For protein, this will identify the scope for more effectively linking food production to One Health goals.

Restoring balance on Europe's farms to improve food security

European farms are essential to Europe's food security. According to the Food and Agriculture Organization (FAO), food security exists when everyone has permanent physical, social, and economic access to sufficient, safe, and nutritious food that meets their food preferences and dietary needs for an active and healthy life. Sustainable food security depends on the long-term viability of food production and consumption patterns, ensuring the needs of future generations can also be met.

Donau Soja recognised a decade ago that if the soybean as a legume is to make a meaningful contribution to sustainable development in Europe, we need to help European businesses and consumers address the challenges of the wider food system. Legumes, defined by their butterfly-like flowers, are a special and diverse group of protein-rich plants that fix their own nitrogen. But although they grow well here, legume crops such as soybean, pea, faba bean, and lupin are relatively rare in Europe. This is because they find it hard to compete with other crops, especially winter cereals, which grow exceptionally well in many parts of Europe. However, soybean is competitive on farms in European regions with warm summers. European soya helps us to break the link between European protein consumption and global deforestation; it supports more diverse cropping; is not reliant on nitrogen fertiliser and uses few pesticides; and supports sustainable and healthy diets. A warmer Europe is likely to further improve the relative competitiveness of legumes, especially soybean, on European farms.

Due in part to its high lysine content, soya is an excellent protein supplement for feeding livestock. Farmers are understandably reluctant to reduce its use. However, if we are to reduce the protein deficit, we must look critically at the use of soya in animal feed. Soya is used widely, even for ruminants which do not need such high-quality protein. We need to look at the marginal costs of these systems with a view to reducing the intensity of protein use while retaining farm competitiveness.

Restoring a focus on crop performance

Ultimately, arable farming is about converting sunlight and nutrients into carbohydrates, protein and oil. Farmers' crop choices are influenced by the fundamental biological processes that underpin each crop's performance in the competition for land within farms. Basic crop physiology and Ricardo's law of comparative advantage explain why, in view of Europe's climate, many European farmers rely on autumn-sown cereals. These cropping systems are highly productive due to the combination of temperate conditions and long summer days over much of the region. The result is high self-sufficiency in temperate foods but persistent dependence on imported protein. For protein crops to expand, they must be efficient and productive, supporting both farm-level competitiveness and bringing environmental benefits.[3] Diversification in cropping using protein crops must build on agronomic strengths to avoid an overall reduction in production and an increase in the land area used for Europe's food. Sustainable progress requires a strong focus on improving the on-farm relative crop performance of the most productive protein crops.

[3] Murphy-Bokern, D. (2022). Developing legume-supported cropping systems in Europe: Have we overlooked something? Annals of Applied Biology, 1–4. https://doi.org/10.1111/aab.12764

Establishing a balanced approach to trade

The protein challenge is global. Even with significant change, Europe is likely to still need to import plant protein from traditional exporting regions. We need to switch to soya sourced from regions and systems that are thoroughly validated and meet high environmental and social standards. We can identify three areas of sourcing: from within the EU, from neighbouring countries, and from outside Europe (especially from across the Atlantic). We argue that a European Union protein strategy must align with the European Neighbouring Policy and facilitate sourcing from the EU's closest eastern neighbours, especially Ukraine, giving soya grown to EU standards unrestricted access to European markets.

WHY WE NEED CHANGE

> **How we eat determines, to a considerable extent, how the world is used.**
>
> \- Wendell Berry, poet and farmer

Since Berry wrote these words over thirty years ago, science has shown how protein consumption and production shapes our planet. Because of its ties to the nitrogen cycle and different land use options, protein production is second only to energy use in driving greenhouse gas emissions. Protein compounds are polymers of nitrogen-rich amino acids. They are the building blocks of life, found in all plants and animals. Protein links our diets directly to our use of livestock, cropland, grasslands, and our fisheries. Using Berry's words, how we chose to produce and consume protein determines, to a considerable extent, how the world is used.

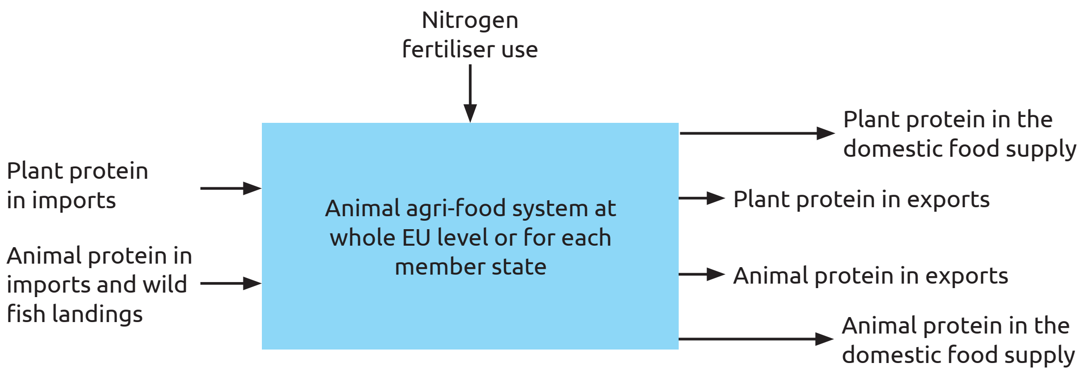
The EU's agri-food system, which arose from the ashes of World War II, is a technological wonder. With the exception of plant protein, the EU is mostly self-sufficient in key foodstuffs, using just 3.3% of global farmland to feed 5.5% of the world's population. It even exports cereals and other key products. This achievement is underscored by the fact that European diets are rich in resource-demanding animal protein. The challenge now is to preserve these strengths while supporting food production within planetary boundaries.

Europe's protein deficit is a fundamental challenge

Europe's agri-food system relies on two key resources: annual imports of roughly 10 million tonnes of nitrogen fertiliser and 32 million tonnes of imported protein-rich soybeans. The COVID-19 pandemic and Russia's 2022 war on Ukraine exposed our food system's vulnerability to trade disruptions. Global consensus on free trade has shifted to protectionism, tariffs, and trade wars, causing supply chain and market turbulence that increasingly threatens Europe's food security. All this adds to the food system vulnerabilities caused by our protein deficit.

Monitoring change

The goal of a European Union protein strategy must be to change the pattern of protein consumption and production to reduce both the protein deficit and emissions of nitrogen into the environment. We argue that the balance between plant and animal protein consumed as food or exported to that imported should be seen as a key indicator of agri-food system performance, and is relevant to a wide range of policy areas. This balance can reveal and quantify beneficial changes in production, conversion, and consumption for whole systems. Member state-level balances will vary greatly so that no one size fits all. The merit in such a metric is that it can be used to monitor change in whole agri-food systems from year to year. It can be enhanced with more detail of protein production and transformation, directly revealing changes in the protein economy. Most of the data needed to determine such a balance already exist, and could be used to highlight particular aspects, for instance the import of protein-rich crop commodities such as soya. The food balance and trade data provided by FAOSTAT require only minor modification to facilitate the routine generation of such protein balances. Protein content estimates in particular need to be added to the descriptions of traded commodities.



A simple protein/ nitrogen balance for the European Union and member states.

Initiatives taken since 2018 have had little impact

Donau Soja advocated for a holistic protein policy in its 2018 Protein Strategy for Europe, framing protein as central to agri-food system performance. At the time, EU consensus supported the Green Deal, Farm to Fork, and Biodiversity Strategies. By 2024, farm protests reflected growing hostility to the Green Deal, viewed as driving overregulation. Meanwhile, global warming is accelerating. Policymakers now struggle to balance short-term pressures with the goal of net zero by 2050.

The European Parliament Research Service[4] traced EU protein policy from the 2017 Europe Soya Declaration, signed by 14 agriculture ministers, to the Commission's 2018 report on protein crop production.[5] Despite suggested measures and some growth in protein crops, the deficit persists. In 2023, the European Parliament again stressed the need for an EU protein strategy.[6] Although 20 CAP strategic plans include coupled income support, the impact is marginal: protein crops covered only 3.6% of EU arable land in 2023, resulting in production volumes vastly smaller than the volume of soya imports. We believe that the Commission's Vision for Food and Agriculture has the potential for positive progress.

[4] European Parliament Research Service (2023). Briefing. EU protein strategy
[5] European Commission (2018). Report from the Commission to the Council and the European Parliament on the development of plant proteins in the European Union. EUR-Lex - 52018DC0757 - EN - EUR-Lex
[6] European Parliament (2023). European protein strategy. European Parliament resolution of 19 October 2023 TA MEF

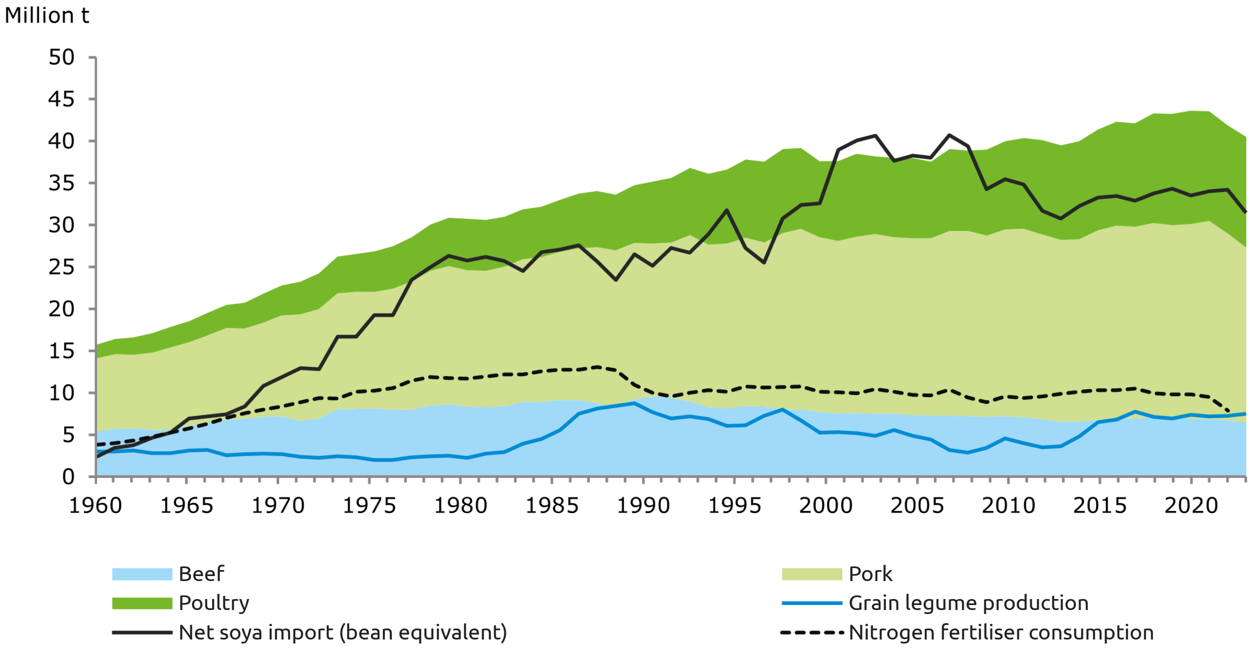
A protein transition supported by a holistic protein strategy will help protect planetary boundaries

Our food consumption choices influence the amount and location of land needed for our food, and ultimately determine Europe's protein deficit and its global land footprint. The thousands of different protein compounds in plants and animals all have one thing in common: nitrogen. This reactive nitrogen is essential to life but is also a public enemy[7] because too much of it damages the environment. The nitrogen cycle is one of the most exceeded planetary boundaries[8], largely because the conversion of plant protein into protein in meat, milk and eggs results in large emissions of polluting nitrogen compounds into the water and air. Most of us in Europe consume more protein than we need, and a large proportion of that protein is sourced from animal products, consumed in excess of public health guidelines. Consequently, Europe's protein economy is not operating within sustainable limits.[9] Our challenge is to make better protein choices that care for our planet.

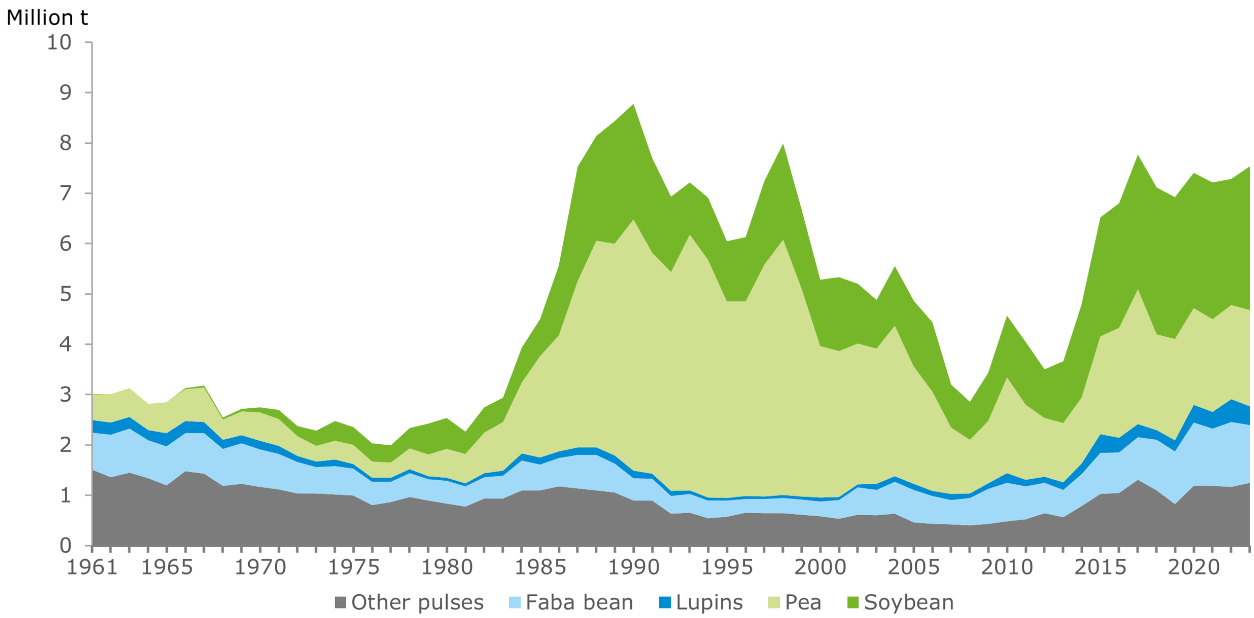
Donau Soja's focus on protein, outlined in its Protein Strategy of 2018, holds that how we use and source protein is the single most important factor in the performance of our food system. A policy focus on protein opens up the opportunity to develop integrated and integrating measures which have system-wide effects that are incontrovertibly linked to basic environmental processes, particularly those impacting the nitrogen cycle and land use. A focus on protein and the nitrogen cycle would move public debate towards consideration of how consumption and production in our food systems interacts with key resources and environmental processes.

The political consequences of controls on nitrogen emissions cannot be overstated. The Europe-wide farm protests were first sparked off by protests against Dutch government measures to control nitrogen emissions arising from Dutch farmers' use of plant protein. A wide range of policies across Europe focus on nitrogen pollution as it relates to protein but in a fragmented way, with each polluting compound having its own policy framework. The Nitrates Directive, which is a major determinant of farm practice, uses constraints on the stocking rate to control nitrate emissions to water. Ammonia emissions in Europe exceed internationally agreed limits but the policy framework is largely disconnected from related policies on nitrates. In addition, nitrous oxide (a very powerful greenhouse gas emitted in particular from the agricultural nitrogen cycle) is regulated by member states under the United Nations Framework Convention on Climate Change (UNFCCC). A holistic protein strategy with supporting metrics and a protein observatory has the potential to support a protein transition that serves the Vision for Agriculture and Food.[10]

[7] Dalton, H. and Brand-Hardy, R. (2003). Nitrogen: The essential public enemy. Journal of Applied Ecology 40(5):771 – 781 DOI:10.1046/j.1365-2664.2003.00849.x
[8] Richardson et al. (2023). Earth beyond six of nine planetary boundaries. Science Advances 9 DOI:10.1126/sciadv.adh2458
[9] Buckwell, A. and Nadeu, E. 2018. What is the Safe Operating Space for EU Livestock? RISE Foundation, Brussels.
[10] European Commission 2025. A Vision for Agriculture and Food. https://agriculture.ec.europa.eu/overview-vision-agriculture-food/vision-agriculture-and-food_en



Changes (million tonnes) in the production of livestock products, net imports of soya, grain legumes (protein crops) and the use of nitrogen fertiliser in the European Union 1961-2023. (Donau Soja graphic using data from FAOSTAT accessed in June 2025)



Changes (million tonnes) in the annual production of grain legumes (protein crops, million tonnes) in the European Union 1961-2023. (Donau Soja graphic using data from FAOSTAT accessed in June 2025)

A protest sign in a roadside field on Texel Island in July 2022. 'Stop the nitrogen madness'. Dutch government proposals to reduce nitrogen emissions sparked off farm protests in the Netherlands in 2022 which evolved into Europe-wide protests in 2023 and 2024. Photograph: Donal Murphy-Bokern.

Donau Soja is a European, multi-stakeholder, not-for profit membership organisation supporting the European Protein Transition with a particular emphasis on sustainable European non-GM soya production. It is based in Vienna, with regional offices in Serbia, Ukraine and Moldova. More than 330 members in 33 countries, 866 certified partners and 24 European governments have joined forces with a common vision.

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