OPEN LETTER / JOINT STATEMENT

To the President of the European Council, the President of the European Commission, the High Representative of the Union for Foreign Affairs and Security Policy, and the Members of the European Parliament

Calling for Strategic Seriousness on the Risk of a European Protein Shock

We, the undersigned, write to draw attention to a vulnerability in the European Union that we believe has not yet been weighted with the seriousness it deserves: the dependency profile of our food system. We write also to point to a strategic opportunity that, if grasped now, would address that vulnerability while strengthening Europe's resilience, its economy, and reducing its environmental footprint at the same time.

Europe is not going to run out of food. What it is not sufficiently prepared for is a protein shock, i.e. a sudden disruption to the imported protein, feed additive and fertiliser flows on which European livestock and crop production, and the food supply downstream of them, depend. The risk is not to Europe's calories but to its nutrition continuity. Europe imports the bulk of the high-protein feed upon which its livestock sector runs, much of it from a small number of overseas suppliers.[1] It also depends upon imported feed additives, such as vitamins, and amino acids whose production is highly concentrated in mainland China.[2] Its fertiliser supply, and the natural gas required to produce it, remain highly exposed to actors who have already shown a willingness to use energy and tariffs as tools of coercion. This dependency grows more dangerous still as climate extremes become more probable in the small number of distant regions upon which Europe relies for the inputs that feed its protein production.

A protein shock would propagate through European supply chains within weeks. Its consequences for households, prices, and political stability could be more severe than those of the oil shocks of the twentieth century, because food touches every household directly and immediately, and because the substitution options available within the existing system are limited.

Food security has rightly risen on the European agenda, and the European Union has taken important steps to strengthen its crisis preparedness, including the creation of the European Food Security Crisis preparedness and response Mechanism (EFSCM) and proposals that would oblige Member States to take part in EU-level stress testing. We welcome this work. Its value will depend on what those tests contain: scenarios built around bulk commodities alone will not surface the exposure described above.[3] A food system built entirely upon crops and livestock is shaped by the seasons, the weather, the available land, and the limits of biological production. No supply-chain reform, no stockpile, no trade diversification can change that. A new layer of production, however, can.

The technologies that allow protein and other essential food ingredients to be produced through industrial biomanufacturing (the use of microorganisms or enzymes in fermentation tanks to produce protein, fats, vitamins, and other food and feed components) from European inputs are now mature enough to begin closing the dependency gap at scale. This is not a call for the transformation of European agriculture or the European diet, although changes here will also be needed**. Instead, it is a call for building an additional layer of protection into the food system — one that strengthens what European farmers and citizens already produce and consume.** For the European citizen, this means familiar foods that can be made with ingredients produced in European facilities, drawing on European agriculture, at prices that no longer rise and fall with overseas harvests or geopolitical decisions in distant capitals. They are, in a meaningful sense, a protective mechanism for Europe's food system: production that can be located in European industrial parks rather than across distant borders, running on inputs Europe already has, and that is far less exposed to the geopolitical and climatic shocks the current system is experiencing. The same shift would, also strengthen European industrial competitiveness in a sector that is set to become economically significant over the coming years, and reduce the land, water, and emissions burden of European food production. Resilience, competitiveness, and sustainability rarely line up so cleanly as they do for a scale-up of domestic biomanufacturing.

Realising this opportunity requires public investment in scale-up infrastructure, a regulatory environment that allows European products to reach European consumers on reasonable timelines, and a sustained signal that the European Union intends to be a producer in this sector and not only a consumer. China is already signalling it is moving in this direction and either Europe builds its own domestic sector, or it risks running into even deeper dependencies.[4]

The window in which Europe can seize this opportunity is narrow. If Europe does not invest now in the industrial capacity for the next generation of food and feed production, it will not escape its protein dependency but simply trade today's exposure for tomorrow's. The pattern will be familiar to anyone who has watched China dominate the markets for solar photovoltaics, batteries, and pharmaceutical precursors over the past decades.

We therefore urge that the dependency profile of the European food system be recognised as a strategic vulnerability of the same order as energy and critical raw materials, and that the building of European industrial capacity for the next generation of food and feed production be treated as the resilience investment it is and supported with the urgency the moment requires. This will demand thinking that crosses the traditional boundaries between agricultural, industrial, and security policy.[5]

We stand ready to support this work with ideas and resources to move from concern to action.

Signatories

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- **Mogens Lykketoft** – former President of the United Nations General Assembly (70th session); former Minister for Foreign Affairs and former Minister for Finance of Denmark
- **Connie Hedegaard** – former European Commissioner for Climate Action
- **Janez Potočnik** – former European Commissioner for Science and Research and for Environment
- **Tonio Borg** – former European Commissioner for Health and Food Safety
- **Rob Zaagman** – former Ambassador of the Netherlands to Denmark
- **Prof. Rudy Rabbinge** – Emeritus Professor of Sustainable Development and Food Security, Wageningen University; former Member of the Dutch Senate
- **Dr. Christian Patermann** — former Director, European Commission Directorate-General for Research
- **Nebojsa Nakicenovic** – former Vice Chair, Group of Chief Scientific Advisors, European Commission, Honorary and Distinguished Emeritus Scholar and former Deputy Director General, IIASA
- **Christopher (Chris) Hegadorn** – Adjunct Professor of Global Food Politics, Sciences Po (Paris School of International Affairs); former Secretary of the UN Committee on World Food Security (CFS) and retired U.S. diplomat
- **Dr. Andreas Worberg** – Head of Centre for Biosolutions, Technical University of Denmark; Vice-Chair Biotechnology, NATO Science & Technology Organization, TSI
- **Kevin Camphuis** – Biotechnology Lead within the EIT Food Protein Diversification Think Tank

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