

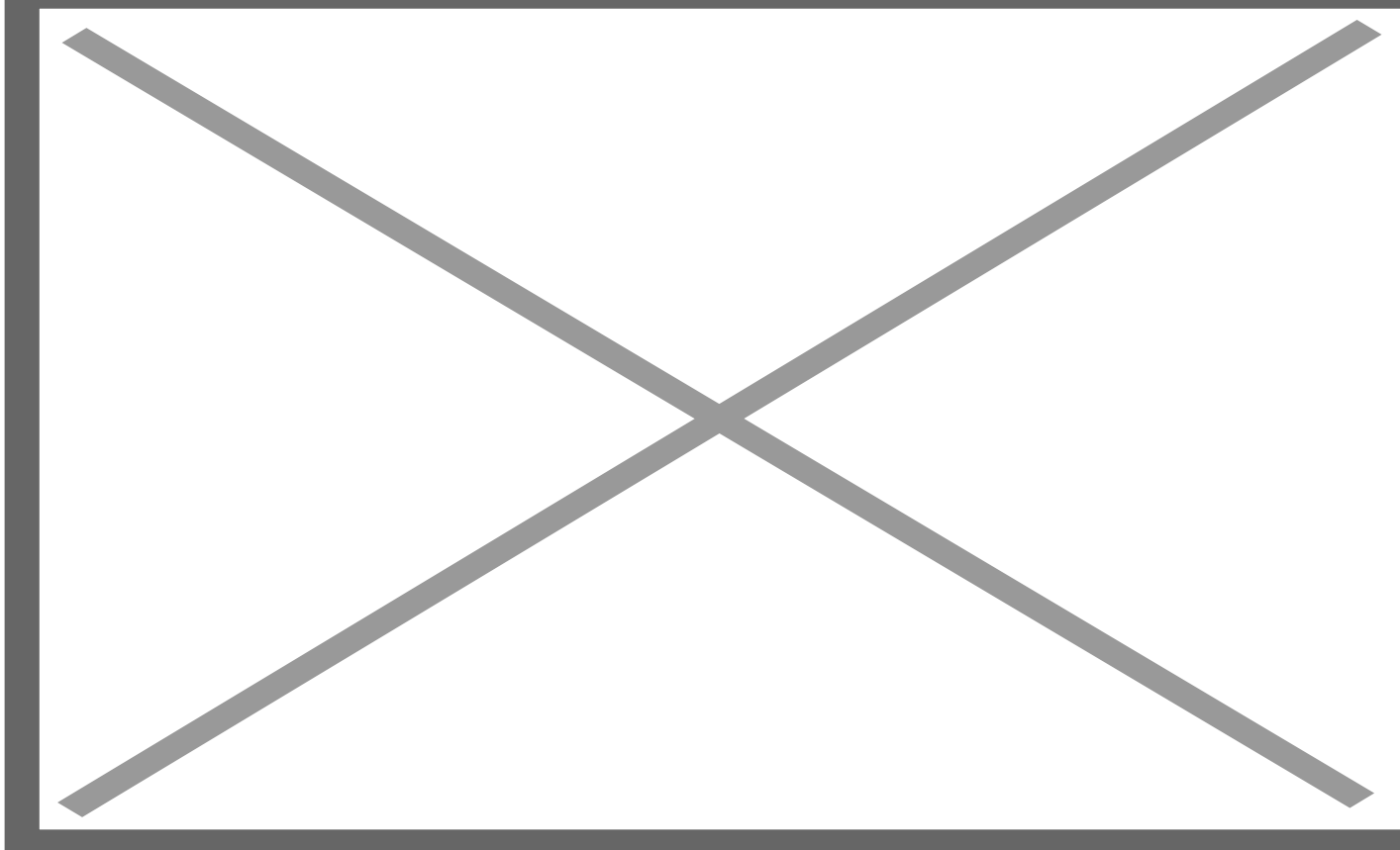
Viewpoint: Farm-to-Fork plan suggests Europe wants sustainable farming. So why do EU politicians ignore the ‘green’ benefits of GM crops?

There is ongoing disagreement between the popularly elected European Parliament and the executives in the European Commission over approvals of “genetically modified” (GM) crops, which are made with modern molecular genetic engineering techniques. In December, members of the European Parliament [objected](#) to authorizations of no fewer than five new GM crops — one soybean and four corn (maize) varieties — developed for food and animal feedstock. These objections follow dozens of others that have been made over the previous five years. (These are the same varieties that are ubiquitous in many other countries, including the United States.) A European Commission spokesperson [has suggested](#) that a new approach will be necessary to authorize such “genetically modified organisms,” or GMOs, in order to align with the new [Farm to Fork Strategy](#), an agricultural strategy recently embraced by Europe:

We look forward to constructive cooperation with the co-legislators on all these measures, which we believe will enable the achievement of a sustainable food system, including GMOs on which the EU feed sector is presently highly dependent.

The latter part of this quote is, in fact, incomplete: There is extensive reliance of the EU on imports of both *food and feed*, of which a significant portion is genetically engineered. In 2018, for example, the EU imported about 45 million tons a year of GM crops for food and livestock feed. More specifically, the livestock sector in the EU depends heavily on imports of soy. According to Commission figures, in 2019-2020 [the EU imported 16.87 million tonnes of soymeal and 14.17 million tonnes of soybeans](#), most of which came from countries where GM crops are widely cultivated. For example, 90% originates from four countries in which around 90% of cultivated soybeans are GM.

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Credit: Andres Stapff/Reuters/Corbis

For a GM crop to enter the EU marketplace (whether for cultivation or to be used in food or feed, or for other purposes), an authorization is required. Applications for authorization are first submitted to a Member State, which forwards them to the European Food Safety Authority (EFSA). In cooperation with Member States' scientific bodies, EFSA assesses possible risks of the variety to human and animal health and the environment. Parliament itself plays no part in the authorization process, but it can oppose or demand rejection of a new GM crop based on any whim, prejudice, or the bleating of NGOs in their constituencies. They have chosen to ignore the sagacious [observation](#) of the 18th century Irish statesman and writer Edmund Burke that, in republics,

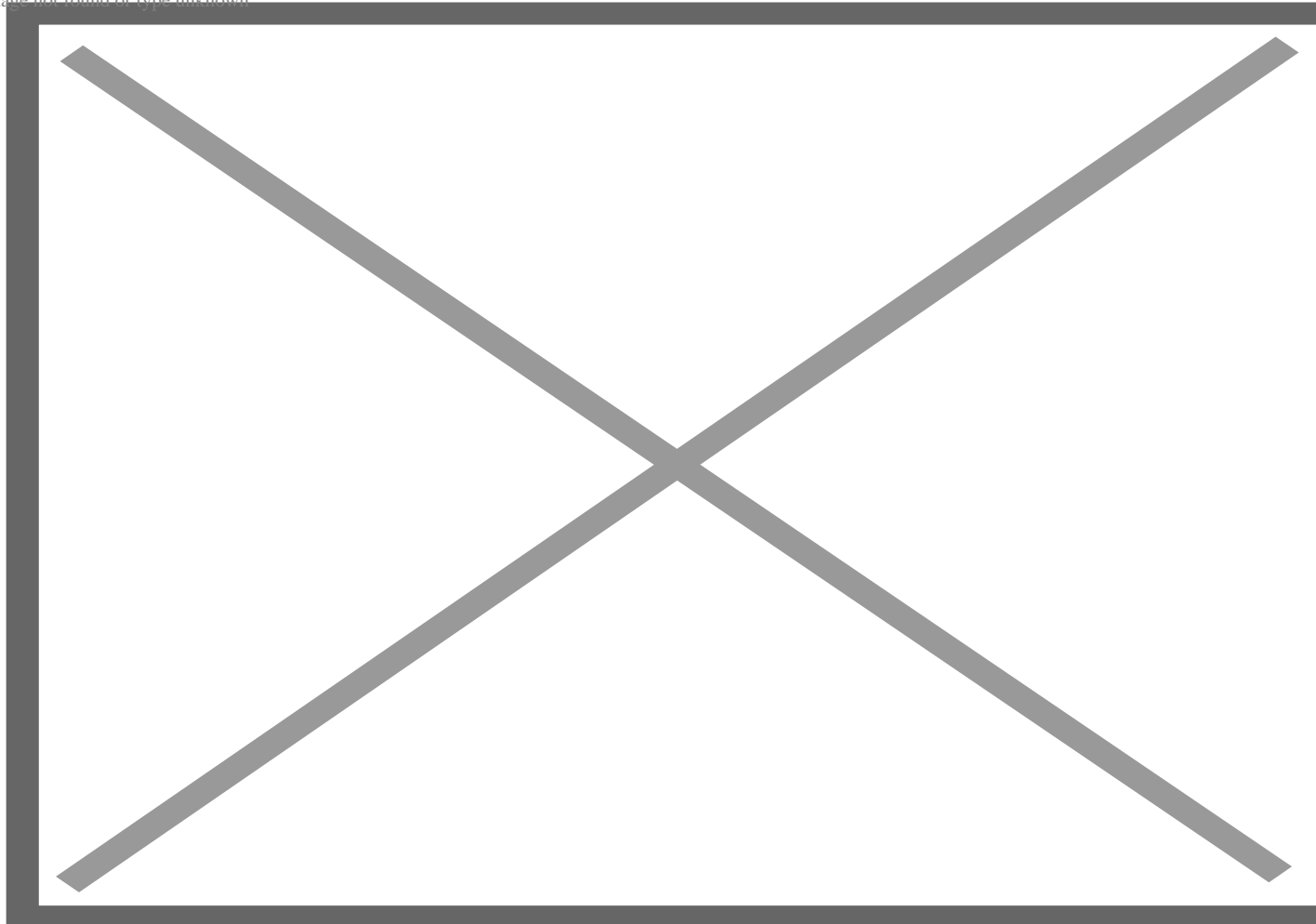
Your Representative owes you, not only his industry, but his judgment; and he betrays, instead of serving you, if he sacrifices it to your opinion.

GM crops have been shown repeatedly to pose no unique or systematic risks to human health or the environment. The policies articulated in Farm to Fork suggest a renewed interest by the EU in environmental sustainability but conveniently ignore that that is the essence of what GM crops can bring to the table. Numerous analyses, in particular those of economists Graham Brookes and Peter Barfoot, have demonstrated that the introduction of GM crops lessens the amount of chemical inputs, improves

farm yields and farmer incomes, and reduces the need for tillage, thus reducing carbon emissions. The indirect benefits from GM crops include empowering women farmers by removing the drudgery of weeding, and lowering [the risk of cancer](#) by lessening crop damage from insect pests whose predation can increase aflatoxin levels. Reducing crop damage in turn reduces food waste. GM crops can also improve farmers' health by lessening the likelihood of pesticide poisoning, and [GM biofortified crops](#) can also provide nutritional benefits that are not found in conventional crops, a life-saving innovation for the rural poor in low- to middle-income countries.

The rift between the views of the European Parliament and EU scientific agencies such as the European Food Safety Agency (EFSA) shows no signs of healing. [Bill Wirtz of the Consumer Choice Center](#) predicts that trying to achieve the goals of the Farm to Fork strategy will have “dire impacts.” To address a legacy of environmental degradation, the EU proposes by 2030 to increase organic farming by 25% and reduce pesticide application on farmland by 50%. These plans fail to consider that pesticide use has sharply decreased over the past 50 years and that organic agriculture does not necessarily imply lower carbon emissions; often, the opposite is true.

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The green and purple bars illustrate increased land area outside England and Wales needed to produce

food under the organic model. Credit: Nature Communications

Wirtz goes on to describe how slack compliance laws across the EU have made food fraud a viable business model. A significant proportion of this fraudulent organic food stems from international imports from countries, such as China, with a history of inferior quality and violation of food standards. However, he observes, increasing the surveillance and enforcement of food imports standards and rejecting those that are fraudulent could jeopardize current food security efforts, as well as the economy of the EU as a whole, given the EU's substantial dependency on food imports.

The Farm to Fork initiative gets support from occasional specious articles in the “scientific” literature. An example is a paper published last December in *Nature Communications*, [“Calculation of external climate costs for food highlights /inadequate pricing of animal products”](#) by German researchers Pieper *et al.* The paper, which illustrates the hazards of meta-analyses on poorly selected articles, describes the use of life-cycle assessment and meta-analytical tools to determine the external climate-warming costs of animal meat, dairy and plant-based food products, made with conventional versus organic practices. The authors calculate that external greenhouse gas costs are highest for animal-based products, followed by conventional dairy products, and lowest for plant-based products, and they recommend that policy changes be made in order to make currently “distorted” food prices better reflect these environmental “costs.” They also claim that organic farming practices have a lower environmental impact than conventional, and for that matter, GM crops. They failed, however, to reference the immense body of work of [Matin Qaim](#), [Brookes and Barfoot](#), and many others, documenting the role that GM crops have played in furthering environmental sustainability by [reducing carbon emissions and pesticide use, while increasing yield and farmers' incomes](#). The omission of any reference to, or rebuttal of, that exemplary body of work is a flagrant flaw.

The paucity of GM versus organic crop data discussed in the paper is also deceptive. Anyone unfamiliar with the role of GM crops in agriculture would be left with the impression that organic crops are superior in terms of land use, deforestation, pesticide use and other environmental concerns. Yet many difficulties exist, especially, for pest management of organic crops, often resulting in lower yields and reduced product quality.

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There is extensive and robust data suggesting that organic farming is not a viable strategy to reduce global GHG emissions. When the effects of land-use change are factored in, organic farming can result in higher global GHG emissions than conventional alternatives — which is even more pronounced if one includes the development and use of new breeding technologies, which are banned in organic farming.

Pieper *et al* [claim](#) — rather grandiosely, it seems to us — that their method of calculating the “true costs of food...could lead to an increase in the welfare of society as a whole by reducing current market imperfections and their resulting negative ecological and social impacts.” But that only works if we omit all the data on imported food and feed, turn a blind eye to the welfare of the poor, and disregard the impact of

crop pests for which there is no good organic solution.

It is true that animal-based products have costs in terms of greenhouse gas emissions that are not reflected in the price, that plant-based products have varying external climate costs (as have all non-food products that we consume), and that adopting policies that internalizing those costs as much as possible would be the best practice. Conventional farming often has [significantly higher yields](#), especially for food crops (as opposed to hay and silage), than farming with organic practices. The adoption of agroecological practices mandated by Farm-to-Fork policies would greatly reduce agricultural productivity in the EU, [and could have devastating consequences for food-insecure Africa](#). Europe is the major trading partner for many African countries, and European NGOs and government aid organizations [exert profound influence over Africa](#), often actively discouraging the use of superior modern farming approaches and technologies, claiming that adoption of these tools conflicts with the EU's "Green Deal" initiative. Thus, there is a negative ripple effect on developing countries of anti-innovation, anti-technology policies by influential industrialized countries.

Moreover, the EU even now imports much of its food, which as described above, has significant implications for its trading partners and Europe's future food security. The EU seems to have failed to consider that continuing on the Farm to Fork trajectory will require endlessly increasing food imports, increasing food prices and jeopardizing quality. Or maybe they have just chosen to embrace the fad of the moment and kick the can down *la rue: Après moi, le déluge*.

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