

How the war in Ukraine has derailed the European Union Farm to Fork initiative — and sparked debate about what constitutes sustainable agriculture

In March 2020, the EU, unveiled its Farm to Fork (F2F) strategy, an ambitious policy designed to reduce agriculture's carbon footprint. The stated objective: to “accelerate our transition to a sustainable food system”. It outlines five major components:

- Have a neutral or positive environmental impact
- Help mitigate climate change and adapt to its impacts
- Reverse the loss of biodiversity
- Ensure food security, nutrition and public health, making sure that everyone has access to sufficient, safe, nutritious, sustainable food
- Preserve affordability of food while generating fairer economic returns, fostering competitiveness of the EU supply sector and promoting fair trade”

The ambition is to begin a transition to a 'more sustainable' farming system. What that means in practice and how 'sustainability' is defined remain largely unaddressed and controversial.

F2F established targets by 2030 to cut the use of chemical and hazardous pesticides by 50%, reducing fertilizer use by 20%, and lowering by 50% the sales of antimicrobials for farmed animals and in aquaculture. To achieve many of these goals, [F2F proposes](#) “increasing the amount of land devoted to organic farming” to 25% in 2030 from [9.1% in 2020](#).

Follow the latest news and policy debates on sustainable agriculture, biomedicine, and other 'disruptive' innovations. Subscribe to our newsletter.

[SIGN UP](#)

Visionary or misguided?

The response to the strategy has been mixed. In general, environmentalists saw it as a potential shift away from what they see as destructive farming practices that rely on synthetic fertilizers and crop chemicals.

An analysis in [Nature Food](#) praised it as “a first step towards genuine food systems governance and ... well timed to address some of the most pressing environmental and public health concerns that European society faces”. Many green groups saw it as a victory for an 'organic first' policy. The pan-European group Organic Cities claimed it “put organic farming at the heart of the transition to sustainable food systems.”

Many sustainability experts are less sanguine. F2F supporters, including the Nature Food commentators, noted that the commitments are as yet just aspirational:

The concept remains rather ill-defined in the F2F Strategy, appearing as a panacea without

clear conceptual boundaries.

Others question equating organic practices with sustainability, noting that life-cycle studies conclude that the environmental benefits of almost tripling organic acreage could end up releasing more polluting carbon into the atmosphere than conventional practices. [Read this comprehensive review by [Our World in Data](#)]

Economists were harsh in their assessments. F2F, however well meaning, could significantly increase global food insecurity. Its targets are unrealistic, and implementation would reduce food production, resulting in higher food prices.

Independent evaluations

An impact assessment from Wageningen University released in 2021, concluded the recommended F2F policy switch would decrease EU crop output by 10-20%.

US Department of Agriculture [studies](#) estimated a reduction in agricultural production across the EU by 12% by 2030.

Based on our analysis, the food and agricultural sustainability measures proposed by the European Commission (EC) in their 10-year plan to reduce the use of traditional agricultural inputs of land, fertilizers, antimicrobials, and pesticides in the EU would lead to a reduction in both EU agricultural production and their competitiveness in export markets.

F2F could send global food prices soaring — by 89% if all countries followed the European model.

[T]ightening the EU food supply would likely result in price increases that affect consumer budgets, reduce food security, and decrease GDPs worldwide.... Our models find that the more widespread EC's measures limiting usage of agricultural inputs, the more marked these impacts become, with consequences for international food insecurity.

We find that when trade is restricted because of the imposition of the EC's proposed measures, the impacts are concentrated in regions with the world's most food-insecure populations.

image

Image not found or type unknown

Perhaps the most significant unintended consequence of F2F is the disruptions it could bring to Africa and other vulnerable regions likely to face the brunt of the inevitable shortfalls in European food production. The USDA study estimated that “the number of food-insecure people in the world’s most vulnerable regions [would increase] by 185 million (global adoption).”

A Centre for Africa-Europe Relations [brief](#) on F2F also raised red flags, suggesting the plan does not take into account the global sustainability impact of its ‘Europe-first’ proposal.

[T]he F2F and Biodiversity Strategy’s positive impacts on greenhouse gas emissions (due to lower production and increased efficiency in Europe) might be offset by higher emissions from increasing agricultural production outside the EU. Similarly, the F2F and Biodiversity Strategy’s potential biodiversity gains could be offset if they contribute to agricultural expansion in biodiversity hotspots around the equator.

image

Image not found or type unknown

Assessing the fallout of the war in Ukraine

The war in Ukraine which has brought sizable food disruptions globally has further thrown into doubt the ambitious goals established by the F2F. It's prompted an ongoing debate within the EU about whether the strategy should be altered considering the global food disruption caused by the year-long conflict. Food and fertilizer prices have soared as both Russia and Ukraine are bread baskets supplying global markets with wheat, barley, corn, sunflower oil and fertilizers. The associated price hikes for major agricultural commodities and inputs have contributed to global inflationary pressures.

A [European Parliament report](#) from April 2022 noted the magnitude of the escalating food crisis and the collateral damage the war has caused.

Ukraine normally supplies almost half of the cereals (52% of EU corn imports) and vegetable/rapeseed oils (23% and 72% of EU imports respectively) and a quarter of the poultry meat imported to Europe, and Russia is a major global exporter of fertilizers, vegetable oils, wheat and barley. The two countries together account for more than 30% of world wheat exports and nearly 30% of barley.

Russia is the world's biggest supplier of fertilizers, and second largest exporter of potash, a key ingredient in fertilizers. ... [S]anctions will oblige the EU to replace the import share of Russia and Belarus, respectively 60% for potash and 35% for phosphates. In the EU, some fertilizer producers have temporarily halted production, as energy costs were too high.

Europe has at least temporarily slowed its plans to pass F2F sparking a clash between the proponents and opponents of the strategy. F2F supporters are loathe to compromise, arguing the war's disruptions are temporary. They argue the urgency of climate change demands that F2F be fully implemented and not watered down. Skeptics argue the Ukraine war has made it clear why F2F's targets were never achievable, and reconsideration is necessary. They argue for a more comprehensive assessment of food sustainability, which would put innovative technologies such as genetically engineered crops, including CRISPR gene edited varieties, on the table for consideration.

Competing visions

UK's [Financial Times](#) has outlined the political forces that are coalescing to prompt a reassessment of F2F's targets. French president Emmanuel Macron projected a 13% drop in food production, saying the sustainable food strategy was "based on a pre-Ukraine war world" and should be reviewed. According to FT:

A paradigm shift is needed...starting with the objectives, targets and timeline of the Farm to Fork strategy.... Pekka Pesonen, secretary-general of Copa-Cogeca [Europe's largest farmers interest group], said the best way to reduce carbon emissions was to increase productivity. He wants new technologies permitted that would allow gene editing to improve the output of animals and plants. Roughly speaking, two-thirds of the productivity improvements will come from better genetic material, our crops and livestock.

The EU farmers lobby opposes many aspects of the F2F given the difficult situation many EU farmers face because of rising fertilizer and energy costs. That was exacerbated by last summer's heat wave which reduced crop output.

Christiane Lambert, co-president of Copa-Cogeca, said the pesticide cut was "not realistic, adding: "We may not be able to meet consumption demand if we see some of those products being removed due to the directive. It is important that this decision should be taken based on science, not politics."

The proposal to implement the pesticide reduction plans was effectively shelved last September by farm ministers from Austria, Bulgaria, Estonia, Hungary, Malta, Poland, Romania, Slovenia and Slovakia.

During an EU Agriculture and Fishing meeting they jointly requested the European Commission carry out a second impact assessment on the measure because it “does not take into account the impact of the war in Ukraine on global food security and the resulting threats to the European Union”.

Environmentalists push back

Environmental groups, which before the war assumed F2F was a done deal, are panicking. “Watering down the Farm to Fork strategy and its policies will maintain Europe’s dependence on non-renewable energy sources like fossil fuels, and will go against what is needed right now to secure food for all,” the [Food Policy Coalition declared](#).

For the Green lobby there is no room for compromise. They have ferociously criticized any measures to soften the strategy, calling it a sell-out to corporate interests and a reduction in the commitment of the EU to reduce the carbon footprint of the agricultural sector.

Last November, several environmental, organic and Green NGOs co-authored a letter to the EU Ministers for Agriculture, Environment and Health and the President of the European Parliament arguing that it was unacceptable to delay the reduction of pesticide use in the EU. The coalition “strongly condemned the attacks to weaken” the proposal to reduce pesticide use, saying its adoption was “crucial to implement the Farm to Fork and Biodiversity Strategies.

F2F was an important step, they wrote:

... towards achieving a toxic free environment, protecting the environment and achieving resilient farming systems capable of securing food production and facing current and future crises...the massive use of synthetic pesticides already has a negative impact on human health, on biodiversity including pollinators, as well as on water and soil quality.

Drawing on an internal European Commission document, Politico reported in a January [article entitled “Farm to Flop”](#) that F2F was “in deep peril with many of the most ambitious reforms delayed or entirely blocked by political battles among farmers, EU officials and national diplomats.” Three years after its proposal, the article noted:

[T]he green sheen is fading, as twin food and energy crises inflamed by Russia’s invasion of Ukraine embolden critics, from French farm lobbies to the bloc’s own agriculture commissioner, who argues that the shift is too ambitious and will impose an uneven and unfair compliance burden across EU member countries.

According to the EC document, many of the most far-reaching proposed changes are losing traction across the 31 EU countries. The biggest issue: Many countries do not believe the EC’s plan to slash pesticide use in half by the end of the decade is feasible.

“The Green Deal is ... a political program in which all sorts of objectives are included, and which, as is the case with political programs, will be implemented to a greater or lesser extent, EC Agriculture Commissioner Janusz Wojciechowski, known to be against what he believes is an impractical plan, said in

December before the Polish parliament.

F2F was never a realistic policy; it's aspirational but without the necessary details to ensure it's the most sustainable approach. It would reduce food production and farm income and boost food prices.

Much of it is a wish list designed to address the concerns of green activists without significant input from the farm sector with a documented yield shortfall of as much as 44% compared to conventional farming, according to the [most recent independent study](#). A separate [impact assessment from Wageningen University](#) concluded the recommended F2F policy switch would decrease EU crop output by 10-20%.

And since the move to organic farming is less productive than conventional farming, much more land would be required to grow food. That could increase rather than decrease the carbon footprint of agriculture. [A study by Chalmers University of Technology in Sweden](#), published in the journal Nature, concluded that:

Organically farmed food has a bigger climate impact than conventionally farmed food, due to the greater areas of land required.

According to Stefan Wirsenius, who participated in the study,

The greater land-use in organic farming leads indirectly to higher carbon dioxide emissions, thanks to deforestation.... The world's food production is governed by international trade, so how we farm in Sweden influences deforestation in the tropics. If we use more land for the same amount of food, we contribute indirectly to bigger deforestation elsewhere in the world.

The EU needs to rely on science to forge a more sustainable agricultural policy to reduce the carbon footprint of farming and lower the use of chemical inputs, some of which have dangerous ecological impact. Key would be to expand, rather than restrict, the use of new breeding techniques that could lower the toxic levels of chemical, increase yields, offer climate resilience and improve nutrition — but F2F specifically excludes such innovations, bowing to lobbying from green groups.

As the Wageningen University study noted:

Removing legislative barriers to new breeding techniques, to shorten the breeding process significantly could help. This will contribute to making crop production more sustainable in the mid-term for annual crops and in the long term for permanent crops.

Only through the application of advanced technology has food production expanded in the US and Europe even as the number of farmers and the acreage under production has plunged. It is folly to try to turn back the clock to a mythical idyllic time when chemical use in agricultural was less pronounced, when in fact in western countries, we are using less crop chemicals per acre to produce food than any time in history.

Only science and technology can make agriculture more sustainable, lessen its carbon footprint and reduce the use of chemical inputs. The failure of the EU to adopt genetic engineering (GE) for crops at a time when

[many countries](#) including China, Israel, USA, Canada, Argentina, England, Brazil, Japan — and now countries in Africa — are doing so would place EU farmers at a severe competitive disadvantage without making agriculture more sustainable.

Adopting CRISPR and other genetic engineering techniques would enable farmers to grow disease, pesticide and drought resistant and more nutritious crops. With the world population hurtling to 9.7 billion from 8.0 billion currently, all agricultural tools should be on the table. Everything should be done to expand food production and not constrain it. It's critical that science and not ideology drive food policy. Everything should be done to expand food production and not constrain it by making it more expensive to produce, less productive to grow — and less sustainable.

Steven E. Cerier is a retired international economist and a frequent contributor to the Genetic Literacy Project.