Viewpoint: Innovation vs. ideology — How the US and Europe differ on the goal of 'green', sustainable farming

With its new Farm to Fork (F2F) strategy, the EU plans to expand organic farming, an approach that rules out both synthetic chemicals and modern biotechnology, and it intends to use trade and assistance policies to pursue this strategy not just at home but also through Green Alliances abroad.

The United States, by contrast, is emphasizing agricultural innovations based on the latest science—including gene-editing—and is now organizing with other countries a Coalition for Productivity Growth as a counter to European influence.

Environmentalists in Europe believe their new vision is "green," but on closer inspection it is not. If organic farming scaled up to replace 25 percent of conventional farming in Europe, much more land would have to be converted to food production, with damaging results for wildlife habitat and the climate.

In its earlier rejection of GMOs, Europe caused environmental harm by foregoing options to cut insecticide use and adopt no-till practices. Europe's regulatory example also discouraged the adoption of GMO food crops around the world. Europe is now inviting similar harms by classifying and regulating gene-edited crops as GMOs, but this most recent aversion to agricultural science is less likely to enjoy global influence.

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Despite considerable progress on the chemical front, Europe continues to use excessive nitrogen fertilizer on crops, and it also allows excessive nitrogen emissions from livestock operations, causing acid rain, soil <u>acidification</u>, algal bloom, <u>eutrophication</u> in waterways, and animal die-offs.

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While continuing to lag in reducing farm chemical pollution, Europe has also failed to match the United States in production and farm productivity gains.

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Between 1995 and 2019 overall, the agricultural production index for the EU-27 increased by only 7 percent, while agricultural production in the United States was increasing 38 percent (FAOSTAT, 2021a).

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- A shift to more organic production in Europe under F2F will worsen this production performance.
- Organic's complete ban on synthetic chemicals is based on a non-scientific conviction that only nutrients from nature—such as animal manure—can properly maintain soil health.
- Because organic farming constrains production so much, it is not sustainable at scale.

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America's science-forward path

- Farmers in the United States, who are less dependent on government protection than farmers in Europe, have learned the value of a science-forward path.
- Even chemical use has declined on American farms over the past four decades, relative to total production, and in some cases it has declined even in absolute terms. Total fertilizer use on American farms peaked in 1981, and since then it has remained essentially flat, even while total crop production grew 44 percent (USDA, 2019).

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Europe's rejection of modern biotechnology

- Europe's commercial farmers are comfortable with innovation, but government policies have at times held them back.
- With reduced tillage, climate protection gains have also been made from GMO canola
- The imagined risks associated with these new GMO seeds never materialized.

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