



## Overview of the USDA Report on Potential Economic and Food Security Impacts of the EU Farm to Fork and Biodiversity Strategies

The European Commission published in May 2020 the Farm to Fork and Biodiversity strategies as part of the European Green Deal, a major policy initiative designed to promote and advance sustainable economic activities in Europe. Among other things, the EU strategies proposed to reduce the use of agricultural inputs and lands by 2030.<sup>1</sup> For example, the European Union is committed to reduce by 2030 both the use of “chemical” and “more hazardous” pesticides by 50%. Following the release of these strategies, the U.S. Department of Agriculture (USDA) Economic Research Service (ERS) issued a report in November 2020 considering the potential economic and food security ramifications from their implementation.<sup>2</sup> The ERS later published a summary of their findings on March 1, 2021, in USDA’s Amber Waves online magazine.<sup>3</sup>

The report, titled *Economic and Food Security Impacts of Agricultural Input Reduction Under the European Union Green Deal’s Farm to Fork and Biodiversity Strategies*, found that adopting the EU Farm to Fork and Biodiversity strategies would translate into economic instability for most regions in the world with negative effects resulting from a decline in agricultural production and food prices. In general, international trade and welfare would be challenged; thus, leading to a decline in GDP and insecurity in the global food market.

Researchers developed three scenarios in order to determine the effects of the EU strategies across the world on agricultural production, market prices, trade and the economy:

- The EU-only scenario where EU strategies are followed by the European Union only.
- The middle scenario where EU strategies are followed by the European Union along with EU-trade partner regions who depend on food and agricultural exports to the European Union. These regions include European Free Trade Association (EFTA) countries (Iceland, Liechtenstein, Norway, and Switzerland); other European countries; Turkey; Ukraine; the Middle East & North Africa; and Africa.
- The global scenario where EU strategies are followed by all regions in the world.

<sup>1</sup> European Commission, Factsheet: From farm to fork: Our Food, our health, our planet, our future (May 20, 2020) [https://ec.europa.eu/commission/presscorner/detail/en/fs\\_20\\_908](https://ec.europa.eu/commission/presscorner/detail/en/fs_20_908)

<sup>2</sup> Jayson Beckman, et al., *Economic and Food Security Impacts of Agricultural Input Reduction Under the European Union Green Deal’s Farm to Fork and Biodiversity Strategies*, USDA ERS (November 2020)

<sup>3</sup> *Farm to Fork Initiative to Restrict European Union Agricultural Inputs May Increase Food Prices, Further Global Food Insecurity*, USDA Amber Waves (March 1, 2021)



This article will provide a comprehensive summary of the report findings, focusing on the impacts of the Farm to Fork and Biodiversity strategies on the U.S. economy, including impacts on agricultural production, market prices, trade, and other economywide impacts, across all three scenarios.

A prior article, titled *The European Green Deal and Its Impacts on U.S. Agriculture: Overview of the Farm to Fork and Biodiversity Strategies*, discussed the main actions proposed in both EU strategies. As part of its strategies, the European Union proposed to develop a regulatory framework in support of carbon sequestration by farmers and, because there is great interest in the U.S. on that issue, we will address the EU rulemaking process for carbon reduction in a third article.

## USDA Report Findings

### 1. Impacts on production

- EU-only scenario: 12% decline in EU agricultural production; 1% in global agricultural production.
- EU and EU-trade partners scenario: 11% decline in the EU agricultural production; 4% decrease in global agricultural production.
- Global scenario: 11% drop in global agricultural production; 9% decrease in U.S. agricultural production.

Under the EU-only scenario, it is predicted that the European Union would experience a 12% decline in agricultural production, inducing a decrease of 1% in global agricultural production. The report reveals that the volume of oilseeds and wheat produced in the European Union would be most affected by the EU strategy implementation.

If EU-trading partners adopt the strategies, the report determined that there would be a 11% decline in the EU agricultural production and a 4% decrease in worldwide agricultural production.

The United States would see no changes in production under these two scenarios; however, if the EU strategies are adopted worldwide, the United States would see a 9% decrease in their agricultural production. The report identified a drop by 11% in agricultural production in a global scenario.

### 2. Impacts on market prices

- EU-only scenario: 17% increase in EU agricultural commodity prices; 5% increase in U.S. agricultural commodity prices; 9% increase in global agricultural commodity prices.
- EU and EU-trade partners scenario: at least “triple-digit” increase in EU-trade partners’ agricultural commodity prices; 21% increase in global agricultural commodity prices; 1% increase in U.S. agricultural commodity prices.
- Global scenario: price increases vary by commodity and region with at least double- and some triple-digit increases.

Market prices would inevitably rise due to declining agricultural production. The report anticipates a 17% increase in EU agricultural commodity prices in the EU-only scenario. Higher EU commodity prices and tougher competition in the export market may influence food prices, which could result in a 5% price increase in the United States and a 9% increase worldwide.



In the middle scenario, most agricultural commodities in the regions adopting the EU strategy would experience at least a “triple-digit” increase stemming from a reduction in pesticide and fertilizer usage and trade restrictions. For example, the European Free Trade Association (EFTA) region would see fruit and vegetable prices increasing by 247%. Food prices in the United States should not be dramatically influenced and would only see a 1% increase compared to a 21% increase worldwide.

Under the global scenario, the report states that all regions would see a larger increase of their crop prices with some as high as triple-digit increases. Compared to the European Union, however, the United States would experience a bigger price rise of agricultural products in general. For example, the price of milk in the United States would increase by 108.7% and fruits and vegetables price by 136.8% compared to 76.1% in milk and 84.7% in fruits and vegetables in the European Union.

### **3. Impacts on trade**

- EU-only scenario: 2% decline in global agricultural trade.
- EU and EU-trade partners scenario: 9% decrease in global agricultural trade.
- Global scenario: 4% decline in global agricultural trade.

The report determined that implementation of the EU strategies could dramatically weaken international trade as the European Union is a major player in international agricultural trade. If only the European Union adopts the strategies, the report sees a 2% decline in worldwide agricultural trade. It also forecasts for the European Union a slight increase by 2% in agricultural imports and a 20% decrease in agricultural exports. In that regard, the European Union is likely to grow its import of oilseeds from the United States. In addition, the United States would see their exports to the European Union in general grow by 6%.

Under the middle scenario, global agricultural exports and imports would decrease by 9%, which would be explained by export limitations imposed by those adopting regions and less favorable trade conditions. For example, in the United States, imports would decrease by 7%. U.S. exports of agricultural products would fall slightly by 2%; however, the United States would see an increase in their exports of milk by 27.4%.

In a global scenario, worldwide agricultural trade would decline by 4%. The United States would see a 15% decline in overall agricultural imports, the largest decline in all three scenarios for the nation. The report, however, predicts an increase of U.S. exports by 3%.

### **4. Economywide impacts**

- EU-only scenario: \$71 billion loss in E.U. GDP.
- EU and EU-trade partners scenario: \$206 billion loss in E.U. GDP.
- Global scenario: \$1.1 trillion loss in worldwide GDP.

The report analyzed the potential impacts adopting the EU strategies could have on economic growth and observed significant welfare loss and decreasing gross domestic product (GDP) in all three scenarios due to declining agricultural production, rising prices for food and trade restrictions.



Under the EU-only scenario, global economic welfare would decrease by \$95.9 billion, and the vast majority of regions would see a loss in GDP. The European Union would experience a loss of \$71 billion while the U.S. GDP would fall by \$2 billion. In the middle scenario, there would be a \$396 billion decline in worldwide GDP and a \$206 billion loss in EU GDP. The U.S. GDP would be less affected under this scenario with a loss of about \$1 billion. If the EU strategies are globally adopted, economic welfare would drop by \$1.1 trillion. Worldwide GDP also would fall by \$1.1 trillion. In general, the anticipated impacts would be greater under the global scenario, with the EU and U.S. GDP losing \$133 billion and \$74 billion, respectively. The European Union would be the most impacted region in each scenario.

In addition, the report investigated the impacts of the EU strategies on gross farm income and food security. In the EU-only scenario, researchers anticipate EU gross farm income to fall by 16% due to declining agricultural productivity. According to the report findings, farmers across other regions would likely benefit from the situation – gross farm income should grow by 26% in these regions due to a surge in agricultural exports to the European Union – however, at the expense of consumers who will be impacted directly by rising food prices. In the United States, gross farm income should rise by 6%.

Under the middle scenario, a general drop in gross farm income in most regions should be expected due to “relatively muted” price increases in the impacted regions. In the global scenario, the report shows an overall increase in gross farm income, which can be explained by the fact that food producers may reap the benefit of rising food prices resulting from declining agricultural production. Gross farm income worldwide would increase by 17%. The United States would see a 34% increase in their income and the European Union a 15% growth.

The report projects that household food expenditures and food security may be significantly affected mostly due to increasing agricultural prices and decline in GDP. The total number of food-insecure people, which is described in the report as people who do not have access to a 2,100-calorie diet a day, would expand in all three scenarios.

If only the EU adopts the strategies, the average annual food expenditure would rise by approximately \$51 per capita worldwide. For the United States, food expenditures would increase by approximately \$59 annually per capita. Under the middle scenario, global annual food expenditures would rise to approximately \$159 per capita. The United States should report an estimated \$16 annual increase per capita while the European Union would see a rise of \$650.5 in their food expenditures. Under the global scenario, annual food expenditures per capita would increase by approximately \$512 in the U.S., approximately \$602 per capita in the EU and estimated \$450 per capita worldwide.

According to the report, under the EU-only scenario, there would be an increase worldwide of 22 million food-insecure people, especially in Africa and Asia. In the middle scenario, the number of food-insecure people would grow by 103 million people, and under the global scenario, 185 million people. In each scenario, Africa is the region which would suffer the most from food insecurity.

At the end of the report, USDA noted that, despite the EU strategies offering potential technological and innovative solutions to curtail the productivity impacts in EU agriculture from input reductions, additional efforts need to be made for developing new and more reliable



agricultural technologies through research & development (R&D) further expenditure. In this regard, the report states, “a robust and resilient food system may benefit from greater investment in innovative agricultural R&D, where sustainability is achieved through perpetual adaptation to new and distinct challenges through science, innovation, and adoption by farmers in their fields throughout the world.”

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