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Economics

Soaring Fertilizer Prices Are About to Increase the Cost of Food

Russia is a major supplier of every crop nutrient, and higher supermarket bills will be a ripple effect of its invasion of Ukraine.



Workers inspect piles of phosphate fertilizer granules at a storage warehouse in Cherepovets, Russia. *Photographer: Andrey Rudakov/Bloomberg*

By [Elizabeth Elkin](#)

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Ben Riensche, who farms 16,000 acres in Iowa, would be ecstatic to get \$80 per acre selling his corn. But it'll cost him \$240 an acre to feed the plants with nitrogen, triple what he's used to paying. And that's not counting what he'll spend on two other important fertilizers, phosphate and potash, which he says have each doubled in price since he purchased supplies for his 2021 crops.

Pandemic-induced supply bottlenecks and the rising cost of natural gas, a key production input, are among the factors sending fertilizer prices soaring. Add disruptions stemming from Russia's invasion of Ukraine, and consumers will be paying more for almost every plate of food. "You think they squawk about having gas go from three to four dollars a gallon?" says Riensche. "Wait until the grocery bill is \$1,000 a month."



Sacks of phosphate fertilizer at the Cherepovets plant. *Photographer: Andrey Rudakov/Bloomberg*

Russia is a major low-cost exporter of many kinds of crop nutrients. "No other nation has the same breadth of readily exportable fertilizer supply," says Alexis Maxwell, an analyst with Bloomberg's fertilizer analysis and news publication *Green Markets*. "Their fertilizers move to all continents."

It's hard to overstate the importance of fertilizer. The advent of synthetic ammonia fertilizers about a century ago is widely credited for helping food production keep pace with global population growth, freeing humankind from its Malthusian constraint. In that time, the planet's population has gone from

1.7 billion to 7.7 billion, largely thanks to enormous growth in crop yields. Some experts have estimated that the global population might be half of what it is today without nitrogen fertilizer.

If the global trade in fertilizer is further disrupted, it will mean higher costs for farmers across the globe, and in turn more food inflation at a time when global food prices have already been hitting record highs. Prices for the widely used nitrogen fertilizer urea in New Orleans surged 29% from the previous week—a record for the 45-year Green Markets index—after Russia invaded Ukraine.

New Orleans Urea

Price per short ton

Source: Green Markets, Bloomberg

They were already sky-high, thanks to a gas crunch in Europe that has forced some producers to dial back production or, in some cases, close. That's on top of elevated freight rates, increased tariffs, extreme weather, and sanctions on Belarus, which accounts for about a fifth of the global supply of the mined nutrient potash.

“We could be tightening fertilizer supplies ahead of the North American growing season, and that would impact a whole year's global production,” says Arlan Suderman, chief commodities economist at financial-services network StoneX.

Major buyers of Russia's plentiful fertilizer supplies are scrambling for product. In Brazil, the world's top importer of fertilizer, coffee cooperative Minasul logged sales equivalent to 20 million reais (\$4 million) on a day soon after the invasion, says its president, Jose Marcos Magalhaes. It usually sells from 2 million to 3 million reais in agriculture inputs, such as fertilizer and pesticides, daily.

In the U.S., Iowa's attorney general has commissioned a market study on the "unprecedented" increase in fertilizer prices, while U.S. Department of Agriculture Secretary Tom Vilsack has warned fertilizer companies and other farm suppliers against taking "unfair advantage" of the Ukraine conflict to indulge in price gouging.

Riensch, the farmer in Iowa, says it's only a matter of time before the rest of America becomes intimately acquainted with the price dynamics of a commodity previously taken for granted. "You're gonna have a stunning reality," he says. –*With Tatiana Freitas and Allison Nicole Smith*

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