

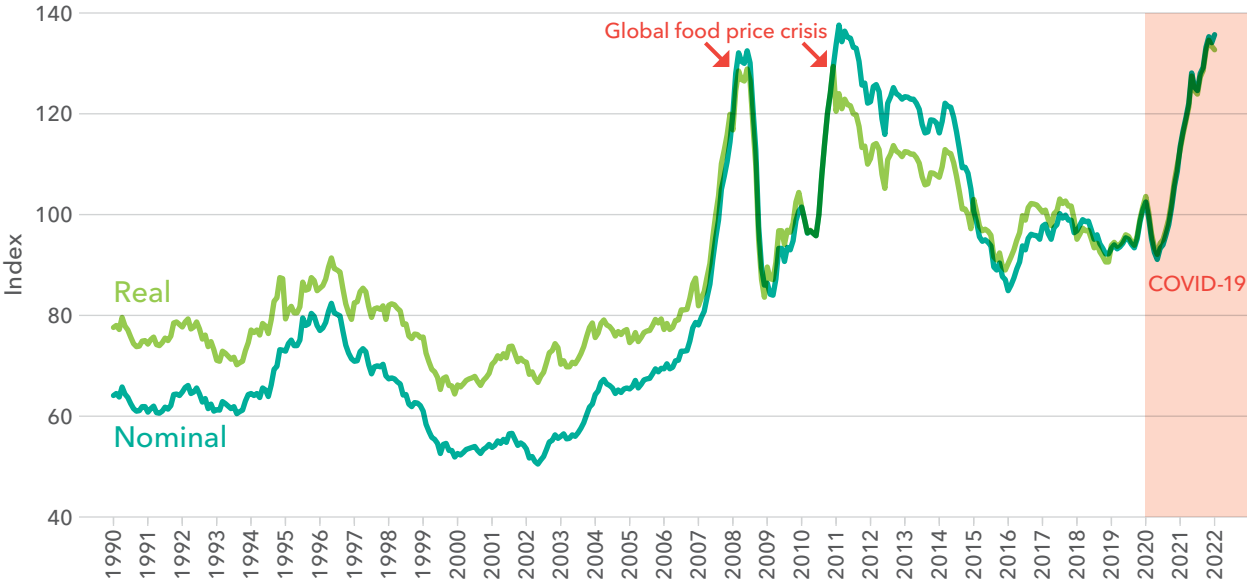
# 10. COVID-19 and food inflation scares

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Rising food prices during 2021 caused concern worldwide. In January, international prices for major food items climbed to a level near the heights of the global food price crises of 2007–2008 and 2010–2011, according to the [FAO Food Price Index](#) (Figure 1). International prices declined in the first months of the pandemic, following the initial lockdown measures that were imposed to contain the pandemic, but by October 2021, prices in international markets had risen by about 30 percent over March 2020 levels. In many countries, consumer prices for food also surged, generating fear that this could lead to rising food insecurity (see, for example, Gerard 2021).

Is the world witnessing a new global food price crisis, with sharp rises in the cost of food and high volatility? Many feared such a crisis at the start of the pandemic, following supply disruptions in many countries and restrictions on food trade imposed by some countries. Those early concerns proved unwarranted, as food supply chains showed resilience, aided in part by governments declaring food sectors to be “essential” and largely exempt from lockdown restrictions (Laborde et al. 2020). Trade restrictions also turned out to be short-lived amid international pressure and early warnings that such measures would be counterproductive (Glauber et al. 2020; Laborde, Mamun, and Parent 2020).

**FIGURE 1** FAO monthly food price index in real and nominal terms, January 1990–January 2022



Source: Data from FAO, [Food Prices Index](#), accessed Feb. 4, 2022.

So, should we be more concerned now? The short answer is both no and yes. Food markets are in better shape now than during the crisis that occurred a decade ago, with reasonable-to-good harvest prospects and abundant stocks for key staple crops. The 2021 surge in food prices is largely associated with the recovery in food demand from the global COVID-19 recession and temporary disruptions in logistics, rather than with severe food supply disruptions or continued trade restrictions. The surge in international food prices therefore need not last. However, even a relatively short-lived surge will affect food security for poor and vulnerable people, and the significant inflation of domestic food prices in many low-income countries is thus a concern.

In this chapter, we identify the main drivers of the recent food price surge in international and domestic markets, including the extent to which COVID-19 is a factor, and assess the implications for food security.

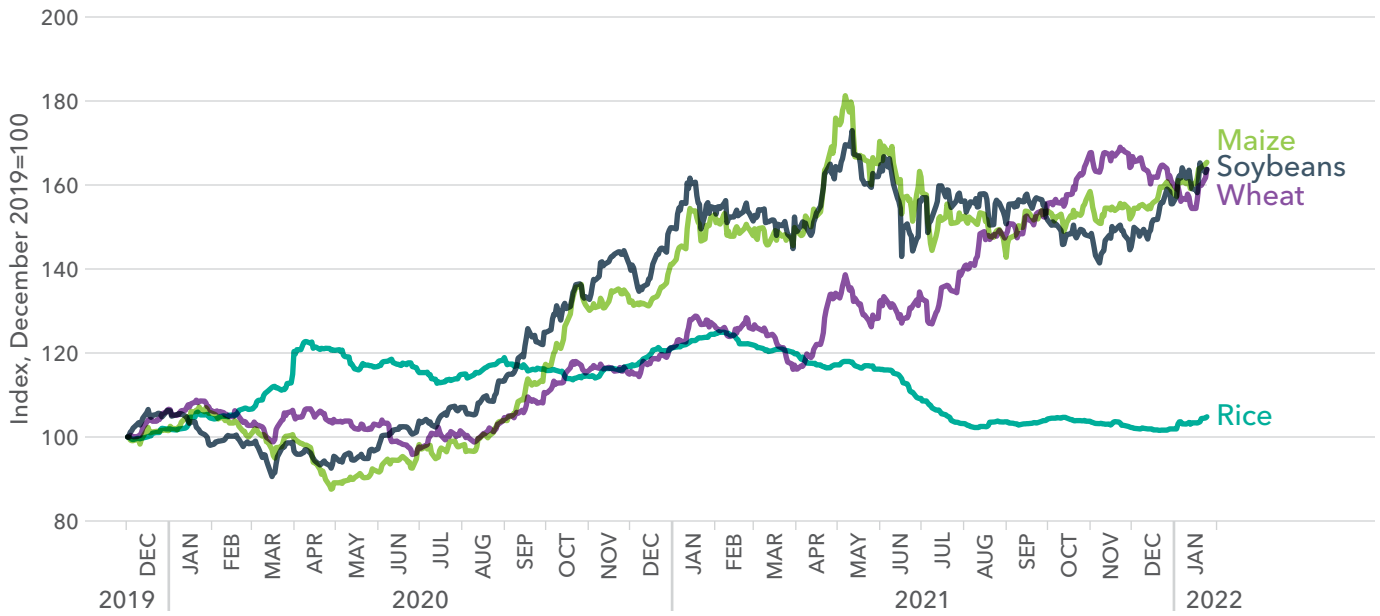
## Trends in international agrifood commodity prices

A detailed examination of the trends in global prices can help explain the ramifications of their surge during 2021. First, the drastic year-on-year change in international commodity prices observed in 2021 partly reflects a “base effect,” meaning a rebound from the 10-year low seen in May 2020, shortly after COVID-19-related restrictions on social mobility were introduced in most of the world (Gustafson et al. 2021).

Second, while the composite index for world market prices of staple crops has risen to the peaks of a decade ago, trends vary starkly by crop ([Figure 2](#)).

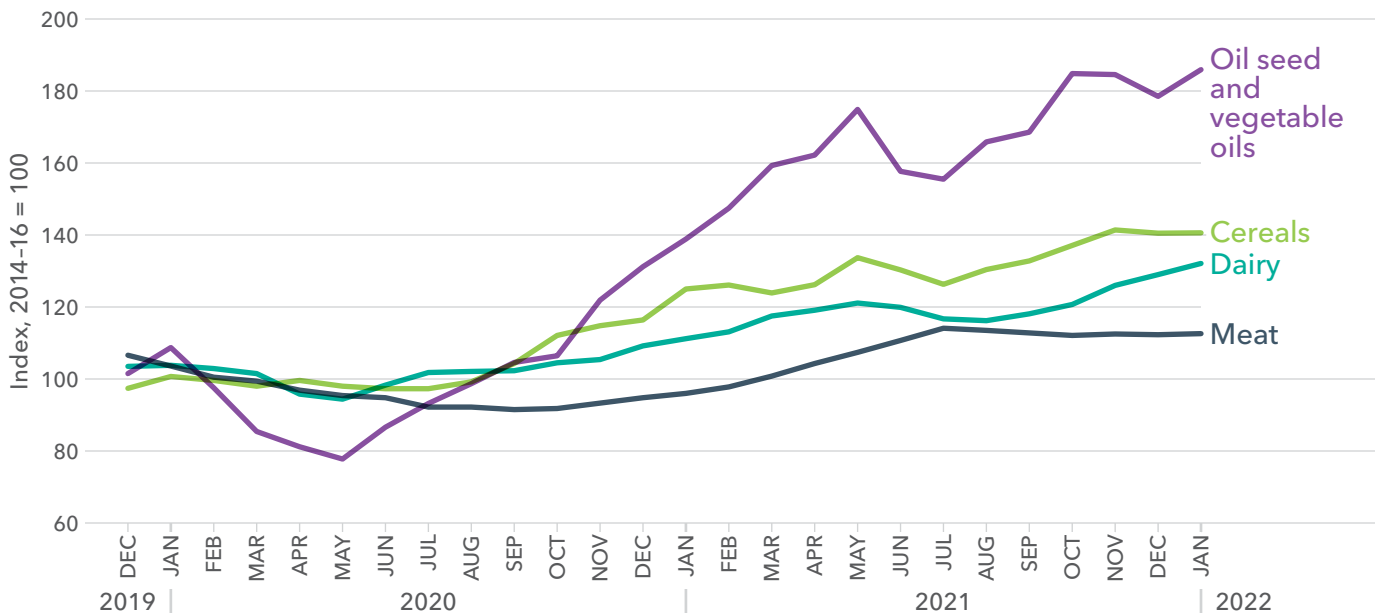
- Prices for **rice** increased before the start of the pandemic-related lockdowns in early 2020, but then declined in subsequent months as the recession began and some rice-producing countries phased out their export bans. Toward the end of 2020, rice prices partially bounced back as the global economy started to recover and demand rose, but international prices for rice have now fallen back to pre-COVID-19 levels, reflecting positive harvest and production prospects.
- In contrast, prices for **wheat, maize, and soybeans** fell in the first half of 2020 before subsequently recovering during the second half of the year. This price rebound, as well as a rebound in prices for nonfood commodities, was due to recovery of demand from China and, in the case of wheat, lower production levels following droughts in several major production areas (the United States, Canada, European Union, Turkey, and Iran). However, the surge in maize and soybean prices ended in the second half of 2021, following what are expected to be record production levels for maize in the United States and Brazil and greater soybean yields in the United States. Additionally, demand for animal feed declined in China as the country’s economic recovery started to falter. Despite these recent declines, prices for maize and soybeans are still well above pre-COVID-19 levels. On average, prices for cereals in November 2021 had risen by around 30 percent from pre-COVID-19 levels ([Figure 3](#)).
- Among other key food items, **vegetable oils** experienced the starkest increase in prices, rising by more than 80 percent from pre-pandemic levels. Prices for all types of oils (palm, soy, sunflower, and rapeseed) have undergone sharp increases due to the recovery in global import demand and the surge in crude oil prices, which is increasing demand for biofuels. Palm oil prices also

**FIGURE 2** World market prices for cereals and soybeans, December 2019–January 2022



Source: Data from International Grains Council, [World Market Prices](#), accessed Jan. 25, 2022.

**FIGURE 3** World market prices for cereals, vegetable oils, meat and dairy, December 2019–January 2022



Source: Data from FAO, [Food Price Watch](#), accessed Feb. 1, 2022.

experienced upward pressure from lower production in Malaysia, a major producer, due to ongoing migrant labor shortages (AMIS 2021).

- International prices for **dairy** and **meat** products also increased during 2021, but less starkly, remaining below the FAO Food Price Index average (Figure 3). Dairy and meat prices trended upward with the global economic recovery. More recent trends are showing downward pressure on meat prices. In China, for instance, pork prices dropped by as much as 48 percent from last year's levels due to the recovery of the hog population, which had been reduced in recent years by African swine fever (NBS 2021).

The recovery of global demand has been a key driver of the surge in international agricultural commodity prices. In particular, markets have tightened as a result of stronger-than-usual demand for animal feed and agricultural products for industrial use. China has been a major influence: with the recovery of its economy and its livestock sector from African swine fever, the country's need for wheat, maize and other feed grains, and soybeans has risen significantly as a result of demand for feed. Growth prospects for China's economy appear less rosy, however, which should soften these pressures on global food prices. Supply disruptions, which have been more closely related to weather conditions than to the pandemic, have had less influence on price surges. Although trade restrictions played a key role in exacerbating the global inflation of food prices during 2007-2008 and 2010-2011, they proved short-lived during the current crisis. Several wheat- and rice-exporting countries imposed export bans in the first months of the COVID-19 crisis, but these were phased out by mid-2020 (Glauber et al. 2020; Laborde et al. 2020). The recent food price rise, however, could tempt governments to impose new trade restrictions, as is already happening, for example, in the case of Russia (wheat), Argentina (beef), Indonesia (palm oil), and China (fertilizers). If not contained, we could see shades of the food price crisis of a decade ago.

Three additional factors influenced upward trends in international food prices during 2021.

- **Exchange rates:** From the start of the pandemic to mid-2021, the US dollar depreciated between 10 and 15 percent against other major currencies. Since most commodity trade is in US dollars, traders demand higher prices to compensate for the exchange loss, which then leads to higher world market prices. The weaker dollar has thus contributed to both stronger trade and rising prices. Toward the end of 2021, however, the dollar strengthened again, lessening the impact on global commodity prices.
- **International freight prices:** The cost of bulk freight reached an all-time high in early October 2021. The Baltic Dry Index, a composite index of international bulk shipping rates (including those for grains), increased by more than 400 percent between January and October 2021 (Figure 4). Freight costs initially declined in early 2020 before slowly trending upward again from mid-2020 onward as international trade recovered from the COVID-19 recession. During 2021, however, supply bottlenecks emerged as consumer demand for manufactured goods surged, and manufacturing industries and container shipping encountered logistical bottlenecks and labor shortages while trying to handle the increase in demand. At times, economists also use freight costs as an indicator for inflationary pressures. Since freight costs declined significantly (by 50 percent) between mid-October and the end of November 2021, commodity and food price inflation should likely soften substantially by the end of 2021.

**FIGURE 4** Baltic Dry Index of international bulk shipping costs, December 2019–November 2021



**Source:** Data from [The Baltic Exchange](https://www.balticexchange.com/), accessed Dec. 1, 2021.

**Note:** The Baltic Dry Index (BDI) is an index of average prices paid for the transport of dry bulk materials across more than 20 routes.

- Fertilizer prices:** Fertilizer prices have spiked recently, primarily as a result of stronger demand and higher energy costs. In anticipation of greater revenue amid rising agricultural commodity prices, farmers increased their use of fertilizer early in 2021. This increase further tightened fertilizer markets, which were already affected by recent supply disruptions, and drove up prices. Rising prices in global energy markets have also increased the cost of producing fertilizers, to the point where many plants have decided to reduce production or even close down. By November 2020, natural gas prices were double those of the previous year. From maize producers in Brazil to wheat farmers in France, concern abounds that the global fertilizer supply will not be sufficient for the 2021/22 planting season (AMIS 2021).

In brief, the pandemic created many uncertainties about global food market trends, from production to distribution and consumption. During 2021, prices kept climbing and reached record highs for some crops, making food inflation a major concern even in developed countries. Overall, however, markets stayed resilient, with global supplies remaining adequate and logistical bottlenecks proving short-lived.

## Domestic food prices in low-income countries

Domestic food prices are directly related to global agricultural commodity prices, but the impact of a commodity price increase varies by country and depends on how closely domestic markets are tied

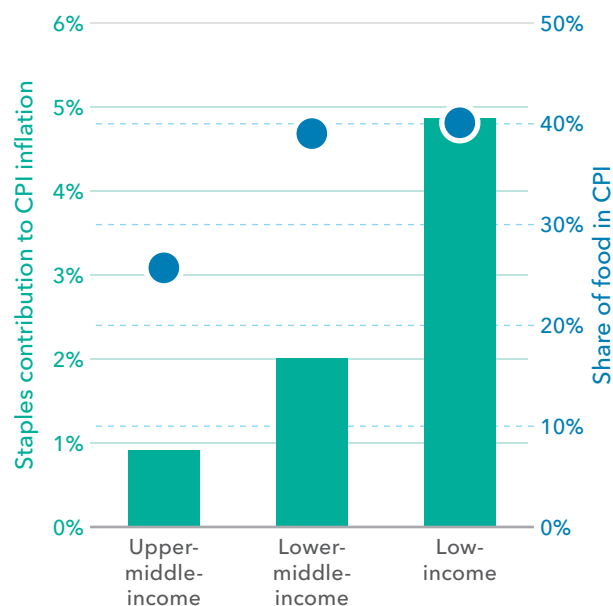
to global markets through trade and how much consumer prices are affected by non-commodity costs like distribution, storage, and processing. In a developed country such as the United States, the farm or import value of a product purchased in a grocery store may be quite low. In a developing country that is highly dependent on imported cereals, the impacts may be much larger.

As a result, low-income countries have been the most affected by the rise in international food prices. In these countries, food accounts for about half of consumption baskets and 20 percent of imports. The rise in international prices for food staples explains about 40 percent of overall consumer price increases in low-income countries during the first quarter of 2021, which were much higher than in middle-income countries (Figure 5). The global recession resulting from the COVID-19 pandemic has hit low-income countries hard, driving down demand for their exports, causing their exchange rates to depreciate amid insufficient access to contingency finance, and further driving up the cost of imported food.

The extent to which international prices are passed through to domestic markets (pass-through effects) varies by country, however, depending in part on food import dependency, but also on other country-specific factors. As a result, rates of domestic food price inflation also vary significantly among low-income countries (Map 1). For example, during 2021, food prices increased by well over 10 percent (year-on-year) in Ethiopia, Gambia, Guinea, Haiti, Malawi, Mozambique, Sierra Leone, and South Sudan, but remained low or even declined in Rwanda, Somalia, and Uganda.

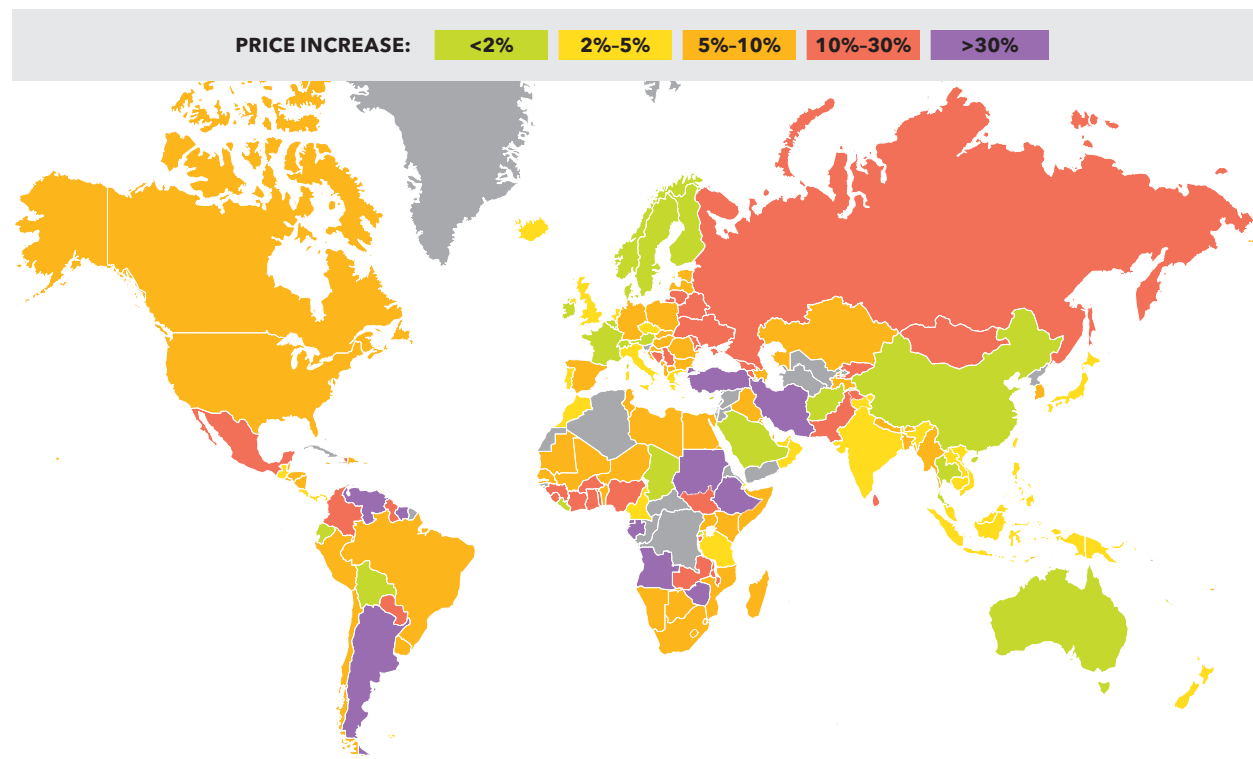
The combination of higher retail prices and reduced incomes has led increasing numbers of households to reduce the quantity and quality of food consumed. Rising food prices have a greater impact on low-income households, since they spend a large share of their income on food. The surge in consumer food prices in many low-income countries partly explains the recent rise in global food insecurity (FAO et al. 2021). Additional evidence shows that the pandemic has been – and still is – detrimental to the quality of diets. The recession caused by COVID-19-related restrictions on economic activity has driven households, especially poorer ones, to shift to cheaper, more calorie-rich staple foods at the expense of costlier, nutrient-dense foods like fruits, vegetables, and animal-source foods (Laborde et al. 2020; Laborde, Martin, and Vos 2021; Laborde et al. 2021). The rise in prices of more nutrient-rich foods, which has been far steeper than that of cereals, likely exacerbated this shift (see Bai et al. forthcoming; Figure 6).

**FIGURE 5** Contribution of staple food prices to consumer price inflation (CPI) by developing-country groups (2020 Q1 to 2021 Q2)



Source: Data from IMF, [World Economic Outlook, October 2021](#), based on FAOSTAT and FAO GIEWS.

## MAP 1 Food price inflation (% year-over-year change in consumer food price index)



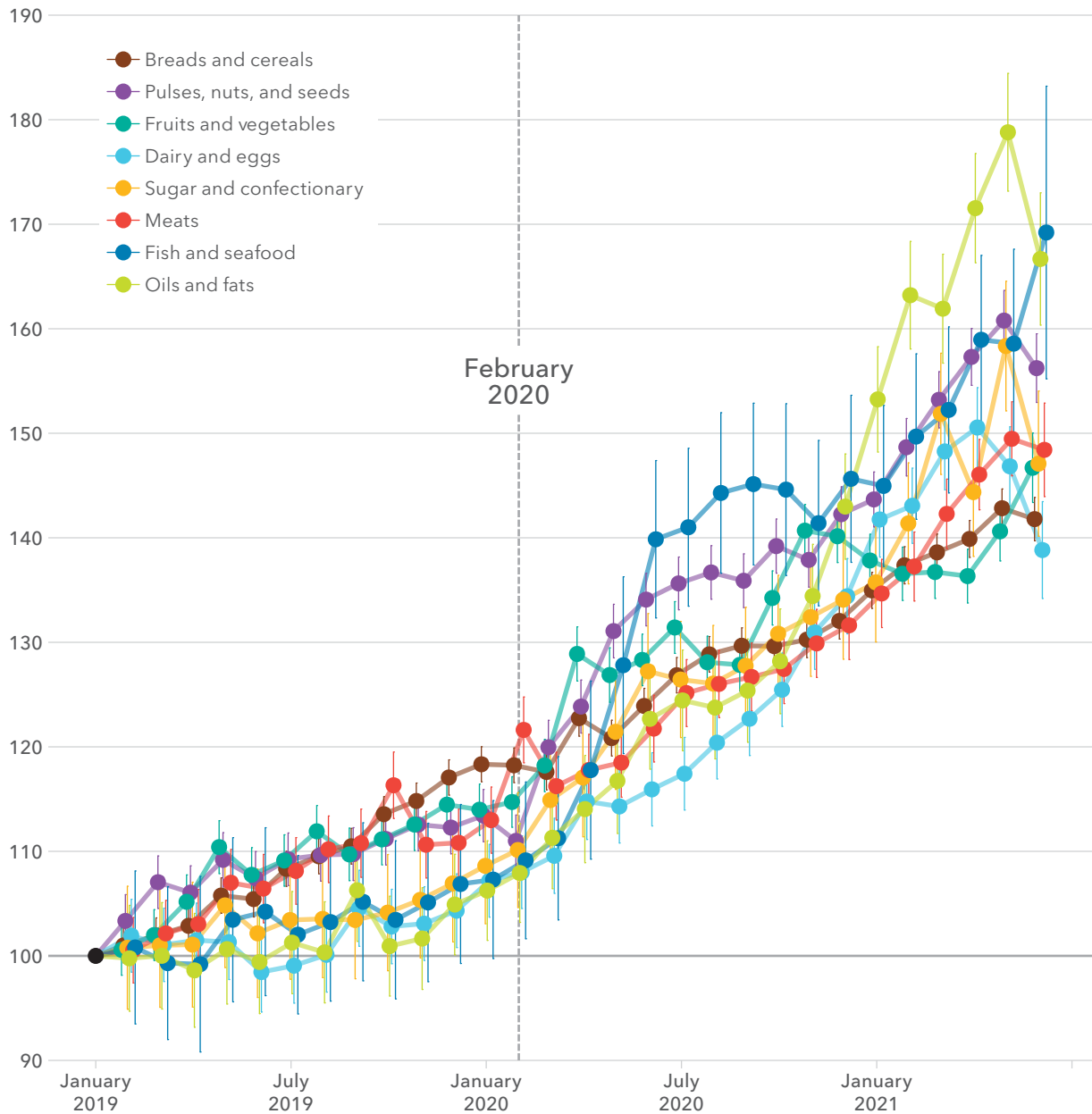
Source: [IMF Database of Consumer Price Indices](#); and [Trading Economics](#). Accessed Feb. 4, 2022.

### Reason for concern, but not for panic

These trends are clearly concerning, yet there is no reason to panic over the possibility of another global food price crisis. Production prospects for staple crops look favorable for the 2021/22 season, and global demand is weakening as the economic recovery in China and other major economies has slowed. Markets for staple crops have tightened over the past two years; global stock levels for rice remain comfortable, although those for wheat and maize were still tight at the end of 2021 ([Figure 7](#)). These conditions should be expected to lessen inflationary pressures in international commodity markets in 2022. Many uncertainties continue to undermine such optimism, of course, including the geopolitical tensions related to Ukraine and a possible return to trade protectionist measures.

Even the more promising prospects may not provide solace to many poor people, as the global recovery is also slowing as the world faces new waves of COVID-19 cases. Poor farmers may earn higher incomes from increasing food prices, but most of them are also net consumers of food. Thus, the vast majority of people in low-income countries are highly vulnerable to food price inflation, and their governments have limited fiscal capacity to protect the purchasing power of low-income families and prevent further food insecurity and deterioration of diets. Given the global ramifications of food price inflation, strengthening this capacity through additional financial assistance should be an immediate priority for the international community.

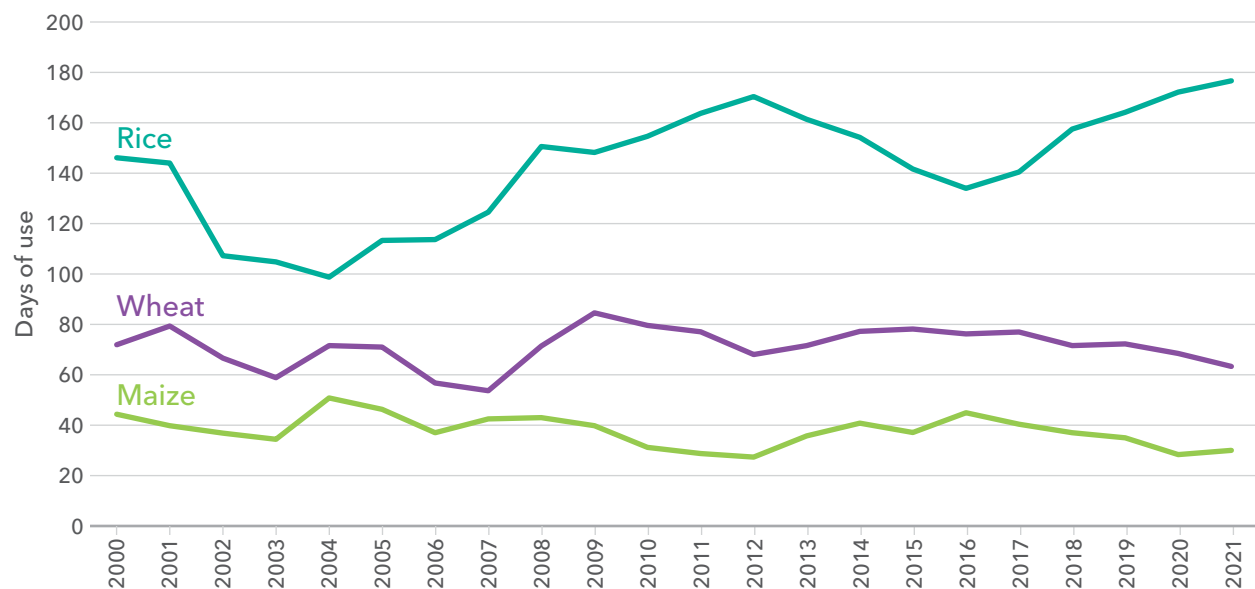
**FIGURE 6** Average prices by food group, January 2019–June 2021



**Source:** Bai et al. (preprint).

**Note:** The graph shows the global mean of weighted indices and 95% confidence intervals for each month, covering 1,344 food items from up to 88 countries. Indices by food item were estimated from a total of 369,088 price observations, each normalized to 100 in January 2019. A total of 87 countries report prices for breads and cereals; 55 for fruits and vegetables; 51 for pulses, nuts, and seeds; 50 for meats; 46 for oils and fats; 41 for sugar and confectionary; 30 for dairy and eggs; and 24 for fish and seafood. Tubers, such as potatoes and sweet potatoes, are categorized as fruits and vegetables in the graph.

**FIGURE 7** Global stocks of cereals not including China (expressed as days of use), 2000–2021



**Source:** Data from US Department of Agriculture, Foreign Agricultural Service, [PSD Online database](#).

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