



COVID-19 and the risk to food supply chains: How to respond?

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WHAT WE KNOW

Countries have shut down the economy to slow the spread of the coronavirus. Supermarket shelves remain stocked for now. But a protracted pandemic crisis could quickly put a strain on the food supply chains, a complex web of interactions involving farmers, agricultural inputs, processing plants, shipping, retailers and more. The shipping industry is already reporting slowdowns because of port closures, and logistics hurdles could disrupt the supply chains in coming weeks.

In order to avoid food shortages, it is imperative that countries keep the food supply chains going. Unlike the 2007–2008 global food crisis, scarcity is not an issue this time. The supply of staple commodities is functioning well, and the crops need to be transported to where they are needed most. Restricting trade is not only unnecessary, it would hurt producers and consumers and even create panic in the markets. For high-value commodities that require workers (instead of machines) for production, countries must strike a balance between the need to keep production going and the need to protect the workers.

As countries combat the coronavirus pandemic, they must also make every effort to keep the gears of their food supply chains moving.

WHAT WE SHOULD DO

First, health is the top priority. Countries must ramp-up testing as much as possible and put isolation measures in place in order to slow the spread. Second, countries should meet the needs of the most vulnerable people, as the measures to contain the pandemic cripple the economy. Third, countries must keep the food supply flowing by prioritizing the health of the workers in the sector and their outputs. The following are specific recommendations.

1. Expand and improve emergency food assistance and social protection programs

These measures provide a buffer to help the most vulnerable people comply with stay-at-home regulations, given that they need daily income to survive. With massive layoffs, families are

¹ Further details on best practices identified can be found at: <http://www.fao.org/2019-ncov/analysis/en/> The author thanks the support provided by the staff of the Department of Economic and Social Development of the Food and Agriculture Organization of the United Nations, as well as all the colleagues at the Rome-based agencies in identifying the best practices.

struggling to put food on the table. More than 160 countries have implemented [nationwide closures of schools](#), impacting over 87 percent of the world's student population. It means the cancellation of school meals, often the only source of nutrition for children in vulnerable households. School meal suppliers and caterers are losing their income, too.

The emergency assistance needs to be provided as early as possible to contain the spread of the virus and to protect livelihoods during recovery later. Food banks and community-based groups, supported by both governments and private charities alike, should be mobilized to deliver or mail food, as families stay home. The delivery mechanism can be used to provide other in-kind assistance, such as protective kits, to elderly people or those with chronic illnesses. In the long term, countries need to invest in improving emergency outbreak preparedness across the food supply chains to address not only the direct threat of an infectious disease but also the indirect toll that poor nutrition takes on health.

For vulnerable households, one-off or multiple cash transfers early on can soften the full-blown impact of the crisis when it arrives. Cash transfers can tide families over until circumstances improve, especially as disruptions to social services occur. Mobile payment systems are ideal to ensure quick delivery and to minimize human contact through cash exchanges. Vulnerable families also need forbearance on tax and mortgage payments. Social protection programs should be expanded to assist those who didn't previously have coverage and who are extremely vulnerable today, including the elderly populations. Complementary entitlements to offset the loss of income is a good example. Any conditionalities attached to assistance should be temporarily lifted.

As of 20 March 2020, a total of 45 countries have introduced or expanded their safety net programs in response to the pandemic. Examples:

- Italy is assisting laid-off workers, putting a moratorium on personal and business mortgage payments, and cancelling debts as part of a [EUR 25 billion relief package called Heal Italy](#). The program includes a one-off EUR 600 payment to households with children under 12.
- The United States of America is offering a [USD 2 trillion economic stimulus plan](#). It includes a one-off payment of USD 1 200 for most adults and an USD 500 additional payment for every child, and expanded unemployment coverage. This package follows a USD 100 billion aid program that included emergency paid leave for workers.
- France is [assisting parents](#) to stay home to look after children and is offering sick leave to people who are under self-quarantine.
- China, Hong Kong, SAR and Singapore are giving [universal, one-off cash payments](#) to all citizens.
- Portugal is providing as much as EUR 1 097 up to 12 months to [self-employed workers](#).
- China has accelerated payments of unemployment insurance and expanded social assistance programs to cover families falling into poverty, while [suspending social security contributions](#) for businesses.
- Peru has [created a bond to protect](#) 3 million vulnerable families and is [advancing pension payments](#) for senior citizens, building on existing programs like [Pensión 65](#). It is providing vulnerable families with a complementary entitlement in addition to national cash transfer.

2. Give smallholder farmers support to both enhance their productivity and market the food they produce, also through e-commerce channels

Restrictions on movement are curbing farmers' access to markets to buy inputs and sell products. Fresh produce is accumulating at farms, [resulting in food loss](#). It is causing labor shortages as migrant seasonal workers are unable to travel. The Ebola outbreak in 2014 disrupted the agricultural market chains in West Africa for the same reason, leading to shortages of food and price increases. Africa is especially vulnerable right now with desert locust infestations already threatening the continent's food supply. In China, logistics constraints and labor crunches have caused losses of fresh vegetables, limited access to animal feed and diminished capacity of slaughterhouses.

Countries must implement the following core measures. First, they should bring collection centers closer to smallholder producers to reduce the need for mobility. Collection centers should have high capacity. Food banks can play a significant role given their knowledge, as well as horizontal and vertical coordination mechanisms with farmers' associations engaged in contract farming arrangements. Second, countries, when feasible, should establish warehouse receipt systems to farmers to use [the receipts to get their payments](#). Third, countries should accelerate the development of [e-commerce for smallholders](#).² Fourth, smallholder farmers must have access to finance, so that they can continue to produce.

A number of countries are introducing stimulus packages that lack clear incentives for smallholder farmers. Farmers need cash handouts and safety net programs that can enhance their productivity. Banks should wave fees on farmers' loans and extend payment deadlines. A capital injection in the agricultural sector can help small and medium agri-businesses to continue operations. Improving storage can help reduce post-harvest crop losses along the supply chain. Any constraints to domestic trade, including bureaucratic hurdles, should be removed in order to link smallholder farmers to markets.

Governments should meet the basic energy needs of smallholder farmers and rural households. For many children in rural areas, too, school closures mean that they don't have access to healthy diet. For producers, it translates into loss of income. Local governments must consider an alternative to school meals, such as home delivery of meal to keep the producers employed and children nourished. During an emergency, governments can purchase agricultural products from smallholder farmers to establish strategic emergency reserves especially for non-perishable commodities to boost food supply. This can be used to deliver safety net programs and school meals even when schools are closed.

Countries should put measures in place to assure the safety of farm workers. On-site healthcare professionals can ensure workers are not ill. If possible, workers should be tested for the coronavirus. At-home coronavirus tests, when they become available, could make this easier. Governments should expedite migrant workers' visas to prevent labor crunches on farm and plants, even if it seems counterintuitive. Growers and warehouses should eliminate visitors. Shops should reduce their hours, rotate the staff and double down on their delivery services. Warehouses and processing plants should be re-engineered to enable workers to practice social distancing. Health professionals should take temperatures of employees and make sure they are wearing masks, gloves and other protective gears.

² The Alibaba Group, JD.com, Meituan-Dianping and other companies have transformed the Chinese consumers' shopping behavior, by moving it to online often through a "super app." As of 2019, China's e-commerce penetration reached 36.6 percent of retail sales with 71 percent of Chinese consumers performing transactions online mostly via smartphone apps. Smartphone apps comprise 80 percent of e-commerce transactions.

Poorer countries can seek international funding to support their smallholder farmers. There are funding mechanisms, such as [the Global Agriculture and Food Security Program](#), which was created in the aftermath of the 2007–2008 food crisis for this purpose.

Actions taken by China and Italy to protect smallholder farmers and their agricultural productivity are worth noting.

China

- During the lockdown, China adopted the “Vegetable Basket” policies to lessen the virus’s impact on change the smallholders and keep food shortages to a minimum. In the late 1980s, the project [increased urban access to fresh produce](#) by expanding vegetable farms in the suburbs and establishing reserves. Under this scheme, farmers and merchants in nine provinces worked together to supply grains, oil, meat, vegetables, milk, eggs and aquatic products to Hubei province, the epicenter of the outbreak.
- Some local governments have unified purchases, centralized animal slaughtering and cold chain storage of county cooperatives, and fully subsidized the storage costs.
- [E-commerce platforms](#) are facilitating the trading of accumulated produce to help boost sales. For example, the Chinese e-commerce company Alibaba set up a special fund to help farmers find markets for unsold agricultural products and is building a “green channel” dedicated to fresh agricultural products.
- The central government in Beijing distributed USD 20 million in [subsidies for machine and tools purchases](#) to revive agriculture. It is giving low interest rate loans and rent reductions to firms to develop high-tech agriculture technologies, such as agricultural drones and unmanned vehicles to reduce human contact while keeping the supply chains moving.

Italy

“Heal Italy” has several [measures to support the agriculture sector](#), complementing existing national policies that ensure access to agricultural services, including supply of seeds and fertilizers.

The program allocates EUR 100 million to support agricultural or fishing companies that had to suspend their operations and another EUR 100 million for financing. It allows farmers to receive advanced payments from the European Union's subsidies for farmers. The program boosts the EU budget for distributing food to the poor by EUR 50 million. The program includes EUR 600 transfer to agriculture workers with short-term contracts.

3. Keep the food value chain alive by focusing on key logistics bottlenecks

The food value chain can be broadly divided into two groups: the staple commodities (wheat, maize, corn, soybeans and oil seeds) and the high-value commodities (fruits, vegetables and fishery). The staple commodity production is capital intensive, and the labor shortage issue resulting from the coronavirus-related restrictions on movement has less impact on their production. However, the logistics to distribute the commodities is affected, as it hampers food transportation across cities, provinces, regions and countries.

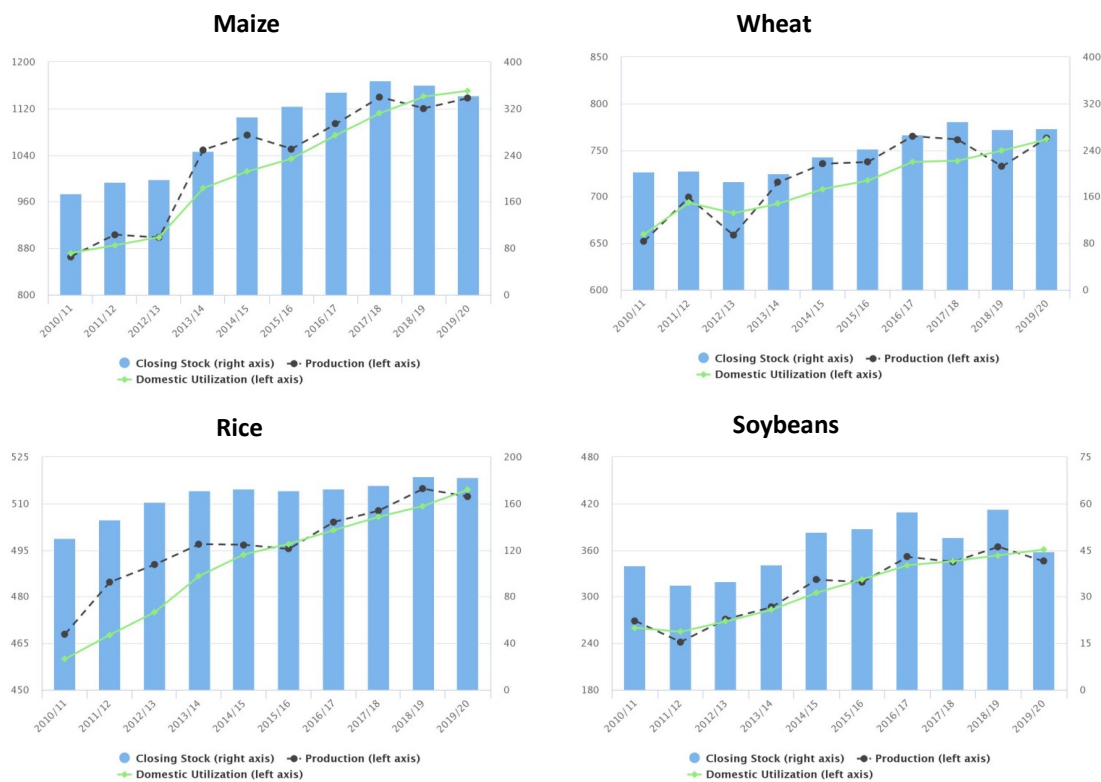
The high-value commodities, on the other hand, require a large amount of labor to produce. So they are substantially affected when employees get sick or local and migrant laborers are not able to travel due to lockdowns. Logistical barriers that disrupt the food supply chains affect the

high-value commodities even more because of their perishability. The high-value supply chain includes food processing plants, which are also labor intensive. Currently, most of the sorting and packing lines do not comply with the social distancing requirements.

There are sufficient stocks of staple commodities (see Figure 1). Prospects for harvest in 2020 is favourable, assuring food availability. However, logistics disruptions in the supply chains are emerging. For example, [Rosario in central Argentina](#) is the country’s major grain export hub, as well as a major soybean production area. Argentina is the world’s largest exporter of soymeal livestock feed. Recently, dozens of municipal governments near Rosario have blocked grains trucks from entering and exiting their towns to slow the spread of the virus. Many are defying the federal government’s order to unblock their roads, citing health concerns. Soybeans are therefore not being transported to crushing plants, affecting the country’s export of soybean meal for livestock. Similarly, in Brazil, another key exporter of staple commodities, there are reports of logistical hurdles putting the food supply chains at risk. Internationally, if a major port like Santos in Brazil or Rosario in Argentina shuts down, it would spell disaster for global trade.

In short, key staple commodities-exporting countries need to make every effort to find solutions to minimize logistics disruptions, so that major staple commodities can move across countries. In fact, the COVID-19 crisis is an opportunity to identify the bottlenecks and address them. The logistics components of the supply chain need to be properly tested and given special permits to move commodities. Port staff should be considered as essential personnel, and proper health and safety measures, including testing, protective gears and practicing social distancing, need to be in place. These measures will bring stability to international markets. It is the responsibility of multilateral development banks and key donors to support staple commodities-exporting countries to enact these measures.

FIGURE 1 | Global stocks of food staples



Source: [Agricultural Market Information System](#)

The supply chains of high-value commodities are more complex, and countries need to move fast to identify them as a priority sector and ensure that migrant laborers can access the farms and plants. Countries must find best ways to strike a balance between the need to keep production going and the necessity of protecting the workers.

4. Address trade and tax policies to keep the global trade open

Countries that depend on imported food are vulnerable as shipments slow and their currencies plunge against the dollar, reducing their purchasing power. Food price is likely to rise in most countries. Sudden and extreme food price shocks could occur amid drawn-out lockdowns. Following government-imposed quarantine, China saw a spike in food prices because of panic buys. In Italy, demand for flour and canned food shot up, leading to difficulties to sell fresh produce.

Countries should immediately review trade and taxation policy options and their likely impacts to create a favourable environment for food trade. During the 2007–2008 food crisis, the lack of information on market conditions (production, stocks, consumption, trade, prices) and uncoordinated policy interventions by countries contributed to disruptions and food price hike. Today, countries have the Agriculture Market Information System (AMIS), which provides up-to-date information on stocks and prices of key staple crops. Cooperation among countries can help prevent [beggar-thy-neighbor policies](#), which happened during 2007–2008. Large countries increased export taxes and adopted export restrictions, making things worse for everyone, not just for smaller trading partners. Sharp price increases disproportionately burdened poor people everywhere, negatively affecting human development and economic productivity in the long term.

Keeping the global food trade open is critical to keep the food markets functioning. Governments should eliminate existing export restrictions, including export bans. There are lessons learned from the 2007–2008 food crisis on how governments should respond. If one country starts doing it, all others will follow, and it would be a catastrophe for the markets. Harmful import tariffs and nontariff trade barriers should be eliminated. Lower import tariffs facilitate imports and therefore helps to address the immediate concern about low food supplies and rising food prices. Countries should also temporarily reduce VAT and other taxes to help stabilize world food markets.

5. Manage the macroeconomic ramifications

China's manufacturing and service sector activities declined dramatically due to the pandemic. The disruption has lowered production and created shocks to supply. China is the world's biggest producer of manufactured components, and closed Chinese factories means having difficulty finding components to make everything from cell phones to cars. There are shocks to the demand side as well. The 2008 global financial crisis demonstrated how reduced income and uncertainty can lead to a recession.

Many economies are already in recession because of measures taken to stop the spread of the coronavirus. But the pandemic must be brought under control before the economy can recover. In fact, countries must be willing to incur greater economic costs to minimize the impact of the pandemic and protect the lives of their citizens.

As countries battle the health and economic crises with aggressive public spending, they need to hold down inflations, especially to reduce the risk of inflating food prices. Governments should assess the impact of their relief and stimulus packages on the balance of payments and ensure they do not run deficits. Likewise, they must ensure adequate levels of foreign exchange reserves. In case food prices jump, they should assess their fiscal measures carefully when responding.

The pandemic is also likely to create more burden for poorer countries and countries that are already experiencing food crisis. They need international financial support, so that they can import additional food without getting themselves deeper into debt.

The world was awfully unprepared for the pandemic. But by keeping the gears of the supply chains moving and actively seeking international cooperation to keep trade open, countries can prevent food shortages and protect the most vulnerable populations.