

COVID-19 has jeopardized agricultural value chains, revealing significant cracks in our food systems.



Postharvest losses in the era of COVID-19

COVID-19 mitigation measures have had a major effect on food loss and waste.

Image by CIAT

The challenge

In March 2020, the World Health Organization formally declared COVID-19 to be a pandemic. Since then, the virus has swept across the world, leaving 620 million cases and 6.5 million reported deaths in its wake.

In almost every country, the pandemic has forced trade-offs between containing the virus and managing the economic and food security challenges arising from the containment measures. Agricultural and food markets have been hurt by restricting the movement of people involved in the production and transport of goods and there have been major shifts in food demand due to income losses and the closing of restaurants, hotels and schools. Export restrictions imposed by some countries have interrupted trade in staple foods, such as wheat and rice.

COVID-19 mitigation measures have also had a significant effect on food loss and waste. Blocked transport routes have caused major losses, particularly of perishable agricultural goods, such as

APHLIS postharvest loss estimates are available at www.aphlis.net

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According to APHLIS, maize postharvest losses in Ethiopia in 2020 were equivalent to the annual protein requirements of 21.8 million children under five years old, and the carbohydrate requirements of over 6 million women of childbearing age.

fruits and vegetables, fish, meat and dairy products. According to the Food and Agriculture Organization of the United Nations, the pandemic has changed consumption patterns as many consumers in low-income countries choose to purchase only staple carbohydrates and foods with a long shelf-life, with the result that perishable food goes to waste in markets. In some countries, fewer consumers are shopping in

local markets due to physical distancing measures, further increasing food waste and reducing incomes for traders. In rural areas, this particularly affects women, who tend to be responsible for local sales.

COVID-19 has jeopardized agricultural value chains and has revealed significant cracks in our food systems. However, postharvest food losses are nothing new. In Nigeria, for example, it is estimated that up to 40–50 percent of fresh fruits and vegetables are lost during crating, transportation, storage and processing. Such losses are highly significant in a world where, even before COVID-19, 690 million people went hungry and 3 billion could not afford healthy diets. Food loss also has serious consequences for health, livelihoods and local economies. According to APHLIS, maize postharvest losses in Ethiopia in 2019 were equivalent to the annual protein requirements of 25 million children under five years old, and the carbohydrate requirements of 7 million women of childbearing age. Over 1.2 million tonnes of maize were lost in Ethiopia in 2019, causing a financial loss of approximately USD 400 million.

The post-pandemic recovery presents us with a massive opportunity to reconstruct value chains that are sustainable and do not tolerate food loss and waste. This includes addressing postharvest losses at various stages along the value chain. Farmers and breeders can develop crop varieties that have longer shelf-lives while retaining their nutritious qualities, and the taste, texture desired by local consumers. Steps can be taken to improve handling, packaging and storage technologies. Awareness can be raised around these technologies and farmers can be trained in their use. Efforts can be made to link farmers to the right markets and transport infrastructure can be made stronger. However, a critical starting point is knowing when,

where, why and how much crop loss is occurring. This is where APHLIS comes in.

The African Postharvest Losses Information Service – [APHLIS](#) – provides policymakers and scientists with rigorous estimates of postharvest loss in Africa – including the nutritional and financial dimensions of loss. Understanding the magnitude of postharvest loss, the point in the value chain where loss occurs, and its causes and impacts helps decision-makers to formulate effective policies and invest in successful loss programmes. It also helps investors to evaluate the impact of their efforts to mitigate postharvest loss.

Even before the pandemic, approximately one-third of all food produced in the world was lost or wasted, with significant implications for human livelihoods and well-being, the global economy, and the environment. Over the past two years, we have watched our food systems struggle to respond to the pandemic as food loss and waste increased sharply for some crops. Building a more resilient food system that can weather future shocks in the supply chain will require creative responses from governments, food companies, tech leaders and others. APHLIS can help ensure that such responses are built on solid scientific ground.