



Mitigating risks to food systems during COVID-19: Reducing food loss and waste

INTRODUCTION

The COVID-19 pandemic continues to wreak havoc globally, generating significant challenges that could result in risks to food security and nutrition in many countries. Countries are ordering lockdowns, restricting movement and observing physical distancing to curb the pandemic. Disruptions in supply chains resulting from blockages on transport routes, transport restrictions and quarantine measures are resulting in significant increases in food loss and waste, especially of perishable agricultural produce such as fruits and vegetables, fish, meat and dairy products. In addition, labour shortages, owing to the restriction of movement of key stakeholders in production and transport, are significantly impacting food supply and demand owing to food shortages in some markets, further contributing to food loss and to the unnecessary waste of food supplies in these difficult times. Upstream segments of the food value chain in middle- and high-income countries have also been severely affected by increased pre- and post-harvest food waste.

Even before the COVID-19 pandemic, logistical challenges and weather conditions in developing countries often caused high levels of food loss during transport and in markets. The onset of seasonal harvest gluts in these countries could further exacerbate the high levels of loss sustained in the traditional food supply chains in these countries.

Further downstream in the value chain, and particularly in high-income countries, the effort to feed the growing number of those affected financially by the COVID-19 pandemic response measures by recovering and redistributing surplus food supplies, which would normally be lost or wasted, are hampered by the difficulty in obtaining the food donations.

Many countries are acting to reduce food loss and waste as part of their efforts to promote food and nutrition security and sustainable development. The challenges brought about by the COVID-19 pandemic put these efforts at risk. Public interventions, such as investments or policies to create incentives to bolster efforts to reduce food loss and waste, are essential at this time.

The Food and Agriculture Organization of the United Nations (FAO) encourages countries to adopt holistic approaches to tackle food loss and waste reduction, in an effort to facilitate access to food for all and particularly for vulnerable groups during the COVID-19 pandemic.

MANAGING THE THREAT OF INCREASED FOOD LOSSES IN TRADITIONAL FOOD SUPPLY CHAINS IN DEVELOPING COUNTRIES

Small agricultural producers (farmers, fishers and meat and dairy producers) operating in traditional food supply chains¹ are the principle suppliers of food in most developing countries. While their operations are typically characterized by high levels of food loss under normal circumstances, a lack of technologies, infrastructure and transport systems has exacerbated

¹ A traditional supply chain is production-driven, where stakeholders lack technical knowledge, technology and competitive and organizational capacities to meet market requirements for safety, quality, consistency and timeliness of supply, as well as the capital to invest in new technologies to upgrade their practices

these challenges during the COVID-19 pandemic. The crisis has led to shortages of labour for on-farm production, harvesting and primary on-farm processing.

Disruptions in supply chains that have occurred because of the restrictions on movement, road closures and other logistical channels, and limited access to markets for purchasing inputs and selling products are resulting in unsold agricultural produce and products, poor quality produce and products arriving in markets and in high levels of food loss, all of which reduces incomes for producers and traders. These issues will likely be compounded at the peak of the crop harvest season, particularly for perishables, forcing market prices to slump. If this is not well managed soon, there will be devastating levels of food loss for farmers.

Some countries have taken measures to build up and protect their food stocks by closing borders and by buying bulk quantities of food from the international market. If food stocks are not well managed, there could be high levels of food loss, as was the case during the 2008 food crisis.

The COVID-19 pandemic has also changed food buying patterns, with consumers in many low-income countries purchasing only staple carbohydrates and non-perishables, resulting in perishable food being wasted in markets. Physical distancing measures have reduced the consumer base that would normally buy their food supplies in markets, resulting in increased food waste in retail markets, and in reduced incomes for traders.

Strategic measures and interventions to reduce food loss in traditional food supply chains

Prioritize a focus on health

Policy responses

- Identify measures at the country level designed to strengthen capacity in countries to respond to the crisis.
- Focus attention on the needs of the production, post-harvest and processing sectors, and try to find the balance between focusing on health and on agricultural systems, which are vital to assuring food security.

Scale up food loss reduction initiatives and manage harvest gluts in traditional local supply chains

Policy responses

- Support labour migration toward ensuring the uninterrupted harvesting of crops.
- Promote appropriate measures for increasing shelf-life and improving packaging and storage to reduce food loss.
- Ensure there are adequate food supplies in local markets.
- Exempt transporters of bulk food and certain food distribution networks from curfew hours and facilitate the transport of perishable foods during the cooler times of the day and at night to maintain quality and reduce food loss.
- Create pooling platforms by developing mobile transport applications (apps) to facilitate logistical arrangements for distributing food across countries.
- Facilitate the development of e-commerce by developing centralized systems in producing areas and establishing zones in order to ensure efficient food marketing.
- Relocate and establish temporary markets in rural, urban and peri-urban areas to facilitate consumer access to fresh food supplies and to reduce market waste.
- Minimize fluctuations in food prices by establishing a list of fixed-price goods.

Implement loss reduction practices in strategic reserves

Policy responses

- Purchase agricultural produce and products from small farmers and establish properly-managed strategic emergency reserves for humanitarian purposes.
- Establish proper and adequate storage facilities for imported bulk quantities of staple food crops to maintain quality and reduce food loss.

Increase local production, manage quality and reduce food loss

Policy responses

- Support labour migration if needed and step up the production of safe food of good quality by providing inputs to support the production of both perishable and staple foods.
- Provide training, extension and financial support to farmers to help them establish new farms, and to rapidly harvest food produced.
- Match increases in productivity output with investments in an appropriate scale of post-harvest technology and mechanization – for harvesting, efficient drying/treatment, primary or partial processing and secondary processing and storage for perishables and durables – supported by training, as a key measure to reduce food loss and maximize the use of food produced, toward assuring food security for local populations. FAO's experience with introducing improved technologies in traditional supply chains has highlighted the need for socialization of the technologies in order to assure they are used widely appropriately.
- Expand outreach to remote and isolated farming communities by harnessing the Internet of Things during the crisis.
- Establish food processing communities in remote geographical locations where producers are highly concentrated and where basic infrastructure is lacking. This might be done by launching mobile retractable stand-alone processing facilities that use renewable energy for processing.

Inject liquidity into the public and private sectors of countries in distress

International financial institutions

- Provide liquidity lines to banks to ensure additional working capital support for small and medium enterprises involved in food production and processing.

MANAGING FOOD WASTE IN DEVELOPED COUNTRIES

In high-income countries with low levels of food insecurity, interventions to address food waste reductions are generally required in the downstream segments of the supply chain – particularly at the retail and consumption stages of the value chain – where levels of food waste are expected to be the highest. The onset of the COVID-19 pandemic has resulted in a shortage of seasonal migrant farm labourers, who have faced difficulties in crossing borders. The closure of much of the hospitality industry and schools has also resulted in a loss of markets for producers. Dealing with the levels of food waste in the upstream segments of the supply chains of perishables, vegetables, and milk, in particular, has been particularly challenging.

At the downstream end of the supply chain, surplus food that would be wasted is frequently donated to food banks and charities to be distributed to those who need it, contributing to resilience building in needy communities. Food banks across the developed world are anticipating a significant increase in the demand for their services, owing to an increase in the number of

people affected financially because of the surge in unemployment. They face a number of problems ranging from a lack of experienced staff, insufficient supply of food, and also locations that are no longer suited to distributing food packages because of the physical distancing measures.

With panic buying and stockpiling by consumers, supermarkets, which are often key donors to food banks, struggle to keep their shelves stocked and are unable to donate food. Yet, much of the food purchased by households may never be consumed and could end up being discarded as food waste because of a misunderstanding of date marking and improper storage of these household food items.

Strategic measures and interventions to manage food waste upstream in the food value chain

Policy response

- Purchase perishable farm produce and products for use in, or for donation to, assistance programmes such as food banks and food charities.
- Direct businesses facing difficulties to emergency loan schemes.
- Promote collaboration between producers and processors to reduce food waste.
- Promote alternative processing options in the supply chain, to reduce food waste (e.g. freezing vegetables or processing milk into dairy products).
- Promote the repackaging of food intended for the hospitality industry in consumer packaging, for sale in retail.

Good practice for food banks

- Seek food donations and keep food banks stocked.
- Secure public and private funding in support of food recovery and redistribution.
- Adjust food collections, food procurement, food distribution and deliveries to reach those most in need.
- Distribute both fresh and non-perishable food items.
- Identify volunteers and partners to support distribution activities.
- Take precautions to help ensure the safety of staff and volunteers during their shifts.

Strategic measures and interventions to manage food waste downstream in the food value chain

Manage and facilitate logistics in the supply chain

Policy responses

- Adjust warehousing, logistics and purchasing processes to meet market requirements. This might include measures such as establishing green lanes for trucks carrying farm goods and lifting driving hour limits for essential products, including “food for emergency”.
- Allow cross-border movement for emergency services, cargo flow and other essentials.
- Implement temporary measures to allow the movement of perishable foods into markets with the appropriate monitoring and surveillance.
- Provide incentives to facilitate import and export activities for food.

Support food redistribution initiatives to reduce food waste

Policy responses

- Provide financial support to food redistribution organizations such as food banks and charities.
- Educate manufacturers and retailers on the meaning of “use-by” and “best before date” marks to ensure they are used appropriately.

Actions of food banks

- Redistribute surplus food to enhance community resilience and to reach the food insecure and vulnerable.
- Adjust food collections, food procurement, food distribution and deliveries to reach those most in need. Within this context, develop and apply standard operating procedures for safe physical distancing, hygiene and sanitation measures as well as modified handling and handover procedures to maximize safety for drivers, volunteers and recipients throughout the process. Such measures might include distributing pre-prepared food, distributing food through small groups of core agencies and through drive-through pickup stations that can disburse more food less often, or distributing food by appointment to beneficiaries, which would minimize contact and the risk of infection.

Actions of retailers

- Donate unwanted, unopened and intact food to charities to be redistributed to those in need.
- Relax procurement standards for suppliers of perishable produce.

Manage panic buying

Policy response

- Simplify administrative procedures to encourage retailers and companies to donate food instead of destroying it. This might best be done by helping to develop and implement legislation designed to combat food waste (prevention, donation), prioritizing the recovery of food for human consumption, and improving efficiency throughout the whole food supply chain, using the model of the Italian Law. www.gazzettaufficiale.it/eli/id/2016/08/30/16G00179/sg
- Promote messaging to reassure consumers that there is an adequate and secure food supply.
- Promote messaging on the detrimental impacts of stockpiling on the food security and nutrition of the most vulnerable.

Promote consumer awareness to reduce food waste

Policy measures

- Educate consumers on the meaning of “use-by” and “best before date” marks to ensure they are used appropriately, which will reduce household food waste.

Actions for consumers

- Refrain from panic buying – buy only what is needed.
- Store food properly in the household.
- Where possible, donate unwanted, unopened and intact food to charities that can redistribute the food to those in need.

Collective efforts and actions to stem the problem of food loss and waste

As far as possible, governments and the donor community must seek to support and invest in developing innovative partnerships and approaches with development agencies, civil society, the food processing sector, and logistics service providers, in an effort to facilitate access to food for all and particularly to vulnerable groups during the COVID-19 pandemic, with a strong focus on maximizing the use of food that is produced, and reducing food loss and waste.

Read more FAO guidelines on COVID-19 [here](#) and about food loss and waste [here](#).

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