# The COVID-19 Pandemic and its Impact on Consumers' Food Habits

Zamir Damani<sup>1</sup> Dritan Topi<sup>2</sup> >>

<sup>1</sup>University of Medicine of Tirana, Faculty of Medical Technical Sciences, Department of Diagnostics and Rehabilitation, Mother Teresa University Hospital Center, Tirana, Albania. <sup>2</sup>University of Tirana, Faculty of Natural Sciences, Department of Chemistry, Blvd. Zogu 1, No 25, Tirana, Albania. Email: <u>dritan.topi@unitir.edu.al</u>

( Corresponding Author)

### Abstract

In January 2020, starting as a flu outbreak in China, COVID-19 was soon declared a pandemic, posing a significant threat to public health on a global scale. Albania experienced the initial impacts at the beginning of March 2020, resulting in the first confirmed cases and subsequent governmental measures that affected the entire population. The government implemented a lockdown, necessitating the cessation of operations for all schools and universities due to transportation restrictions and isolation protocols designed to mitigate the spread of the virus. During the first wave of the Pandemic, Albania distinguished itself as one of the countries that effectively managed the crisis. Social distancing measures considerably affected the coordination system, leading to challenges in food supply for families, particularly in urban areas-disruptions within the agri-food supply chain complicated food distribution to markets in sufficient quantities to meet consumer demands. Throughout 2020 and subsequent years, developed countries adopted an online and offline commerce model, deviating from practices established before the COVID-19 pandemic. Food catering services experienced significant growth during the lockdown compared to the pre-pandemic period. These services flourished by implementing various preventive and control measures calibrated to the scale of the COVID-19 pandemic. In Tirana, the capital city, stringent measures impeded both market and governmental efforts to ensure food supply for residents. The unplanned participation of various entities in online food trading facilitated the resolution of this issue. This period proved to be a pivotal opportunity for individuals globally to conceive future solutions.

Keywords: Agro-business, Albania, COVID-19, Food catering, Food security, Fresh food.

### 1. COVID-19 Disease and the Food

In January 2020, starting with the flu outbreak in China, COVID-19 was declared a pandemic, posing a significant threat to human health on a global scale. COVID-19 is primarily a respiratory illness; no conclusive evidence indicates that food has transmitted the virus (ICMSF, 2020). However, the virus and efforts to curtail its spread have significantly impacted food security and systems. The prevailing understanding is that COVID-19 is not spread through food but rather through the virus's ability to survive on surfaces, enabling it to be transmitted. Available research emphasizes a crucial connection between diet, immune function, and vulnerability to disease. Deficiencies in energy, protein, and micronutrients can weaken the immune system and heighten infection risk. Several functional food plants possess potential immunomodulatory and antiviral effects, including ginger, garlic, saffron, black pepper, pomegranate, and various herbs. Numerous micronutrients, such as vitamins and trace elements, are vital for immune responses; thus, maintaining a micronutrient balance is essential for a healthy immune system (Lange, 2020).

# 2. The COVID-19 Pandemic and the Global Systemic Impact

COVID-19 has significantly affected living conditions, endangering the well-being of billions of people around the planet. In just a few weeks, this Pandemic raised concerns about a global food crisis. The impact on the world economy and global food security was dramatic. There was negative economic growth globally during 2020, with various estimates pointing to 5 to 8 percent, as documented (IMF, 2020). The World Bank's prediction indicated that the global economy shrank by more than 5%, marking the deepest recession since World War II. The COVID-19 pandemic caused a global economic downturn, dramatically resulting in the loss of livelihoods and incomes worldwide (World Bank, 2020).

China officially announced the first death from COVID-19 on January 9, 2020, and by early March, more than 100 countries had reported fatalities. Reported cases continued to rise, surpassing 10 million in late June, as the epicenter of the virus shifted from China to Europe and the United States (Swinnen and McDermott, 2020).

The COVID-19 pandemic developed into a health crisis with multiple and widespread impacts on food, social, and economic development. Pandemics beyond economics caused local, regional, and global connectivity

disruptions. The hyper-interconnectivity of international markets—and the complexity of financial, food, and health systems—amplified the potential of COVID-19 to worsen poverty levels compared to previous pandemics.

A global health crisis could trigger a significant food crisis unless steps are taken to provide emergency economic relief (Laborde & Martin, 2020). The financial consequences in the poorest parts of the world were apparent. Many more people have become poorer and insecure about staple foods. Swinnen and McDermott (2020) estimated that worldwide, during 2020, 148 million people could fall into extreme poverty, i.e., an increase of 20% from current levels. This, in turn, contributed to increased food insecurity globally. According to the International Labor Organization (ILO), more than 400 million full-time jobs were lost in the second quarter of 2020, with several countries implementing lockdown measures (ILO, 2020).

# 3. Impact of COVID-19 on Food Security

Food systems mean all production, processing, distribution, preparation, and consumption activities. The three most important elements of food systems are the food supply chain, food environment, and consumer behavior (HLPE, 2017; Cafiero et al., 2022). The COVID-19 pandemic created all the perfect conditions for a global malnutrition 'storm.' The food crisis brought the deterioration of the nutritional status of vulnerable groups. A dangerous decline in the quality of diet-related nutrition followed the communities in low- and middle-income countries, stemming from the loss of income associated with the shutdown imposed by central governments. Stopping food transfer schemes such as school feeding programs and closing food markets due to demand shocks and supply constraints contributed negatively.

The crisis unfolding by the COVID-19 pandemic has affected food systems. The lockdowns have disrupted food supply chains, resulting in lower family incomes and higher prices for some food products. This has increased the inability of many people to feed themselves, undermining the right to food and halting efforts to meet Sustainable Development Goal (SDG) 2: "Zero hunger."

Following the lockdown measures, disruptions in food supply chains have affected food availability, prices, and quality. The restaurants and other food service facilities shut down led to a significant drop in demand for certain perishable foods, including dairy products, fresh fruits, vegetables, specialty goods, and some meat products (Yunianto et al., 2023).

blockade measures mainly affected the transport of food products through international trade. As borders closed and demand for specific food items fell, producers dependent on sales through distant export markets were highly vulnerable, especially those producers focused on fresh fruits and vegetables.

### 4. COVID-19 Impact on Food Supply System in Albania

In contrast to domestic trade, foreign food trade saw increased exports. This is related to the need for fresh products in neighboring countries. Alternative trading methods through online platforms became effective for the city of Tirana. Ready-to-eat food through the delivery service also met the significant needs of Tirana's consumers. In other cities, the impact of COVID-19 was more limited due to the nature of the disease.

The provision of food to the consumer in Albania has been continuously accompanied by problems related to its quality and food safety (Topi et al., 2017; Mato et al., 2024). Subsequently, the global Pandemic of COVID-19 affected the deterioration of food quality, safety parameters, and access to food (Topi et al., 2023). The application of social distancing measures significantly affected the logistics system and presented challenges related to food supply for families, especially residents in large cities. These measures were implemented immediately in the first wave of infection and lasted until May 17, 2020. Disruptions in the agri-food supply chain contributed to difficulties in delivering traditional methods of supplying agricultural products, such as agrarian markets, supermarkets, and commercial stores, were blocked for the very effect of increasing person-to-person contact and, therefore, the risk of infection. Proper food handling and implementing hygiene rules in industry, outlets, and households can prevent infections. Food packaging is a significant factor that requires attention to stop the spread of COVID-19 in the human population (Duda-Chodak et al., 2020).

During the pre-COVID period, online and offline commerce models were applied in developed countries. The purchase of agricultural products by residents in the cities was based on the distance proximity and the established networks. Limited by transport, packaging, and storage, the most essential characteristic of fresh products limited their distribution radius (Aday & Aday, 2020).

In an unexpected year, the COVID-19 pandemic affected the increase in the export of agricultural products when comparing the periods January-June 2019 and that of 2020. This increase is over 50% in volume, which is calculated at  $\sim$ 20% in monetary terms. The disruption of the global trade chain has impacted the transport of fresh products from long distances. While short distances among neighboring countries of southeastern and central Europe allowed local producers

## 5. COVID-19 and the Fast-Food Revolution

During the lockdown, the food catering service of ready meals had a significant development compared to the pre-pandemic period. These services successfully applied various preventive and control measures according to the COVID-19 pandemic central government-imposed rules. Especially in Tirana, with strict preventive measures and control of outbreaks, it was difficult for the market and the government to provide the residents with food. The spontaneous participation of such entities in online food delivery has contributed to the acceptance of this problem. The ready-to-eat catering service had a significant increase. Implementing different levels of prevention and control measures aligns with the extent of the COVID-19 epidemic. Urban residents relied on local agricultural product supplies, driven by proximity and established networks. The distribution of fresh produce, which is critically important, faced limitations due to transportation bans, packaging difficulties, and restricted storage capabilities, culminating in a reduced distribution radius.

In regions with strict epidemic prevention and control measures, it is difficult for the market and the government to play a timely moving lockdown in ensuring food supply for city dwellers. The spontaneous participation of informal entities in electronic commerce has solved this problem. The ready-to-eat catering service significantly increased. Implementing different levels of prevention and control measures aligns with the extent of the COVID-19 pandemic.

## 6. Conclusions

The food supply chain from the producer to the consumer has been a continuous concern about food quality and safety. The global Pandemic of COVID-19 replaced the focus on food safety and quality toward food security, consequently contributing to the deterioration of food quality, safety parameters, and access to food. This situation has not been considered a factor in health status deterioration throughout the Pandemic. The application of social distance measures significantly affected the logistics system and presented challenges related to food supply for families, especially residents in large cities.

Disruptions in the agri-food supply chain added to the difficulties of bringing food to market in sufficient quantities to meet demand. Traditional methods of supplying agricultural products, such as agrarian markets, supermarkets, and commercial stores, were blocked for the very effect of banning person-to-person contact and, therefore, the risk of infection.

The global experiment during the COVID-19 pandemic presented some lessons, such as the need to make local food connectivity effective, the key role of food producers, and the need for permanent support from the central government for small and medium-sized producers.

### References

ECDC, (2020). https://www.ecdc.europa.eu/en/publications-data/data-national-14-day-notification-rate-covid-19.

Laborde, D., Martin, W., & Vos, R. (2020). Estimating the poverty impact of COVID-19. The MIRAGRODEP and Povana frameworks. HLPE. (2020). Impacts of COVID-19 on food security and nutrition: developing effective policy responses to address the hunger and malnutrition pandemic. Rome. https://doi.org/10.4060/cb1000en

International Commission on Microbiological Specifications for Foods (ICMSF) (2020). "ICMSF1 opinion on SARS-CoV-2 and its relationship to food safety." September 3. International Union of Microbiological Societies. http://www.icmsf.org/wp-content/uploads/2020/09/ICMSF2020-Letterhead-COVID-19-opinion-final-03-Sept-2020.pdf. International Labour Organization (ILO). 2020a. COVID-19 and the world of work. Fifth edition. ILO Monitor. June 30, 2020. (also

available at www.ilo.org/wcmsp5/groups/public/@dgreports/@dcomm/documents/briefingnote/wcms\_7493999.pdf). World Food Programme (WFP). (2020). Global monitoring of school meals during COVID-19 closures. https://cdn.wfp.org/2020/school-

feeding-map/

(UN). COVID-19 United Nations (2020).The impact of on food security and nutrition. June. https://reliefweb.int/sites/reliefweb.int/files/resources/sg\_policy\_brief\_on\_covid\_impact\_ on\_ food\_security.pdf.

Duda-Chodak, A., Lukasiewicz, M., Zięć, G., Florkiewicz, A., & Filipiak-Florkiewicz, A. (2020). Covid-19 pandemic and food: Present knowledge, risks, consumers fears and safety. Trends in Food Science & Technology, 105, 145-160.

HLPE. (2017). Nutrition and food systems. http://www.fao.org/3/a-i7846e.pdf.

Lange, K.W. (2020). Food science and COVID-19. Food science and human wellness. https://doi.org/10.1016/j.fshw.2020.08.005 Mato, L., Damani, Z., Osmanaj, A., & Topi, D. (2024). Nutritional value and quality aspects of wheat produced and consumed in Albania. BIO Web of Conferences, 85, 01059. https://doi.org/10.1051/bioconf/20248501059
Swinnen, J. & McDermott, J. (2020). COVID-19 and global food security. Washington, DC: International Food Policy Research Institute (IFPRI). https://doi.org/10.2499/p15738coll2.133762

Topi, D., Babic, J., Jakovac-Strajn, B., Tavcar-Kalcher, G. (2023). Incidence of aflatoxins and ochratoxin A in wheat and corn from Albania. Toxins, 15(9). https://doi.org/10.3390/toxins15090567

- Topi, D., Babič, J., Pavšič-Vrtač, K., Tavčar-Kalcher, G., Jakovac-Strajn, B. (2017). Occurrence of ergot alkaloids in wheat from Albania. Food Additives & Contaminants. Part A, 34, 1333-1343. https://doi.org/10.1080/19440049.2017.1307528
- Topi, D., Risto, J., Spahiu, J., & Mato, L. (2024). A survey of natural mycological and AFB1 contamination in wheat and maize during the 2022 harvesting season in Albani https://doi.org/10.55214/25768484.v8i5.2007 Albania. Edelweiss Applied Science and Technology, 8(5),2407-2415.

Cafiero, C., et al. (2022), Data collection and analysis tools for food security and nutrition. Towards Enhancing Effective, Inclusive, Evidence-informed, Decision Making. pp. 156, https://core.ac.uk/download/548684913.pdf. Yunianto, A. E., Martianto, D., Husna, A., Putri, W. A. K., Puspitasari, I. D., Susilowati, E., & Ardhian, D. (2023). Old, new, and future food

policy before and after the covid-19 pandemic in Indonesia. *The Indonesian Journal of Public Health*, 10(2), 84–96. https://doi.org/10.35308/j-kesmas.v10i2.7749

Laborde, D., & Martín, M., Vos, R. (2020). Poverty and food insecurity could grow dramatically as COVID-19 spreads. In COVID-19 and global Aday, S., & Aday, M.S. (2020). Impact of COVID-19 on the food supply chain. Food Quality and Safety, 4(4), 167–180. https://doi.org/10.1093/fqsafe/fyaa024