

# Medium and Long-term Strategies on Food and Nutrition Security in Covid-19 Pandemic

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## ABSTRACT

Sustainable provision of food available and access to all sections of a society and continuous monitoring of food security from farm to fork is one of the main responsibilities of governments to ensure the security of the individual, family and society as an important right of the people. The purpose of this mini-review is to provide the medium and longterm solutions to improve food and nutrition security in critical situations such as the Covid-19 epidemic. The challenges and feasible strategies are discussed to reduce all the consequences of food and nutrition security and community promotion.

**Keywords:** Sustainable; Availability; Accessibility; Crisis; Food and Nutrition Security; Strategy; Community; Pandemic; Covid-19

## Introduction

A basic and important human right is a sustainable and accessible food supply and nutritional security for any individual, family in the communities, which must be ensured by the governments. This important task is clearly stated and emphasized in the constitutions of all countries. Food safety from farm to fork is one of their main responsibilities that should be continuously monitored and evaluated. Food security exists when all people have physical, economic, and accessible access to adequate, healthy, and nutritious food always, and meets the needs of a diet consistent with their preferences for a healthy and productive life [1]. The purpose of this mini-review is to consider the food and nutrition insecurity of households, due to the economic, social and psychological consequences of the Covid-19 pandemic and to investigate the related causes and provide practical medium and long-term solutions to control and deal with its possible effects.

In the current situation, hundreds of millions of households around the world use their potential to choose the household food basket that is a function of access to food, income, health, taste and behavior, and the family food table that is the source provides the energy and nutrients needed to maintain a normal cell metabolism,

survival, growth, health, physical and mental well-being, and the longevity of family members. Globally, more than 820 million people have insufficient food, leading to malnutrition and the risk of infectious diseases [2]. In various crises, food security is affected in the food and nutrition system, from production to supply and consumption of food. The consequence of this crisis is a threat to household incomes, a chaotic distribution and an imbalance in consumption.

Since the outbreak of the Covid-19 pandemic, crisis conditions have exacerbated and spread food insecurity in countries. On the other hand, it should be noted that the occurrence of food insecurity and malnutrition by weakening the immune system increases the risk of mortality due to Covid-19. This insecurity is more pronounced in deprived areas and groups, including urban suburbs and poor rural communities, and needs immediate attention. The economic crisis caused by this epidemic and unemployment or the cessation of some jobs due to quarantine and the obligation to stay at home, on the one hand, has led to unemployment and a decrease in household income, and on the other hand, a disproportionate increase in food prices. Poverty reduction goes together with

declining vulnerability [3]. This set has aggravated the social, economic and psychological problems of the society and reduced food security. At the same time, food safety from the stage of raw material production to processing and consumption is at risk and its monitoring and follow-up is necessary.

The dimensions of the issue in the context of the Covid-19 pandemic can be expressed as follows:

- a. Creating weakness and disruption in the chain of production, distribution, and supply of food and agricultural products and thus consumer access and reception
- b. Exacerbation of various forms of malnutrition, including low or high intake and their side effects, including weakened immune system and increased risk of death.
- c. Further threat of pandemic and the spread of food and nutrition in urban and rural areas, especially low-income groups and deprived of basic facilities. Income inequality and unemployment will likely mitigate income-related health inequalities during the COVID-19 pandemic [4].
- d. Factors affected by the economic crisis caused by the Covid-19 pandemic include rising unemployment, the cessation of some quarantined jobs and forced housing, declining incomes and economic access to food, especially for the vulnerable and low-income households. And the occurrence or aggravation of economic, social and psychological problems resulting from them.
- e. Insufficient access to agricultural and livestock inputs, including desirability, quantity and cost for farmers and livestock operators in return for the cost of production.
- f. Import of poor quality and unhealthy food in accordance with the standards in the form of smuggling or from the official points of entry of goods due to ignoring the minimum laws and standard rules of each country.

This review is the result of hours of discussion between the experts and stakeholders in related groups such as nutrition, food technology, agriculture, economics, epidemiology in a specialized working group on the subject in which we tried to examine all aspects, medium-term strategies to in the long run, to reduce the effects of the epidemic on food security and nutrition and to promote it.

### Medium- and Long-Term Strategies

- a) Establishing or strengthening the National Council for Food Health and Safety and intersectional cooperation to increase executive capacity and follow up on approvals by activating specialized commissions under the secretariat to design policies, decisions and also monitor approvals, establish and strengthen secretariats on health and food security in relevant organizations and financing of council approvals and its allocation to relevant organizations by the government.

- b) Reviewing and revising the laws as well as supportive and commercial policies for agri-food products in parliament and related organizations in favor of domestic production.

- c) Supporting farmers and producers of food resources, by facilitating and allocating subsidies to production inputs under the direct supervision of relevant organizations to:

1. Controlling the cost of the product by guaranteeing the purchase of products
2. Elimination of intermediaries through the use and strengthening of production and consumption cooperatives.
3. Educating and Supporting farmers in using modern irrigation methods to save water and soil usage in agriculture.

- d) Close monitoring of production and control of imports of pesticides and plants, their proper distribution and consumption, as well as control of smuggling and registration and follow-up of agricultural land tracking codes and support for research and research on alternative methods that protect the environment.

- e) Close monitoring and control of the use of antibiotics or any harmful or profitable substances in livestock and poultry.

- f) Reduction of food waste through training of those involved in the distribution, production and consumption of agricultural products from the farm to the general center for selling leeks and the final consumer.

- g) Operation of micro and macro conversion industries along with livestock production and agriculture to minimize production losses in the livestock sector, garden and kitchen garden.

- h) Development of small and rural conversion industries to create employment for farmers in rural and suburban areas under the supervision of competent authorities and health inspectors.

- i) Promoting formal and informal educational programs in schools and universities, and mass media, to increase food literacy and nutrition by emphasizing skills training in the field of food preparation, selection and consumption.

- j) Promoting vocational education and skills development programs in schools and applied science institutes in the field of production, agriculture, poultry and livestock, and financial support for agricultural school graduates to encourage them to agriculture and expand production.

- k) Improving the pattern of production, distribution and consumption of agricultural products and food to provide a sustainable diet (healthy and safe, accessible, achievable and culturally acceptable food model, environmentally friendly and to protect the interests of generations be present and future).

l) Increasing the supervision and control of the safety of food products and agricultural products from production, storage, distribution to consumption, by amending the rules and implementing the approvals of relevant organizations.

m) Using the land management approach in policy making of production and processing of agricultural products according to regional potentials with the aim of promoting environmental indicators and sustainability.

n) Utilization of new water resources management technology in the production of agricultural products with a higher productivity approach, more economical alternative crops and the lowest amount of water consumption due to drought and climatic conditions.

o) Development of greenhouse agriculture to have more access to products in all parts of the country by reducing transportation costs, supply management and local employment; reduce water, pesticides and pesticides and prevent erosion and destruction of soil resources.

p) Management of using pesticide by using and developing integrated and biological methods to reduce pesticide consumption and crop pollution and its accumulation in the remaining agricultural and livestock products, which ultimately affects the health of individuals in the household food basket.

q) Establishing or strengthening the food and nutrition office in the Budget Organization, through the establishment of

national data processing centers with emphasis on provincial care and empowerment of local forces related to the economic and social conditions of the region, to continuously monitor the food and nutrition situation at the macro and micro levels, with the participation of stakeholders and responsible organizations and institutions.

r) Supporting and strengthening community-based research to design and test appropriate interventions to promote food and nutrition security in the country.

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