

ASSESSMENT IMPACTS OF COVID-19 ON ETHIOPIAN AGRICULTURE PRODUCTION AND MITIGATION AND ADAPTATION STRATEGY

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Abstract

The COVID-19 pandemic is a recent outbreak in almost all parts of the world including Ethiopia influencing the socio-economy of people and mainly threatening the agriculture and food security of the least developed countries. The current desk review and opinion synthesis by a multi-disciplinary team of experts from Haramaya University aimed at assessing the probable impact of the virus on the Ethiopian agriculture and food security and suggesting the possible mitigation and adaptation strategies to all responsible. Experts' opinion and desk review of existing information were employed for the analysis and conclusions drawn, due to the difficulty of data generation at this time of movement restriction and poor database availability on websites of relevant institutions. Accordingly, the information gathered were synthesised and described following the major stages of food supply chains as production, handling and storage, processing and packaging, distribution and marketing, and consumption are key messages drawn from the overall assessment.

Keywords

COVID-19, Impacts COVID-19 on Agriculture, Mitigation strategies

INTRODUCTION

The current novel coronavirus (COVID-19) outbreak was assumed to have originated from a seafood and wild food wet market in Wuhan and has quickly spread across China and to almost all countries in the world (WHO, 2020). Two-third of the world has imposed control of movement both within its borders and at international boundaries to contain the pandemic. Though these measures are necessary, they could adversely affect food and nutrition security through disruption of food supply chains. All past pandemics like Ebola, Severe Acute Respiratory Syndrome (SARS), and Middle East Respiratory Syndrome (MERS) had negative impacts on food and nutrition security particularly for vulnerable populations including internally displaced people, children, women, the elderly, persons with disabilities and the poor (Reperant and Osterhaus, 2017). As it stood now, the COVID-19 pandemic is already having a significant impact on supply chains and logistics, both for producers and consumers as evidenced by closed borders, national lockdowns, and the reduction in air traffic. This will have many adverse effects on food and nutrition security, particularly in developing countries like Ethiopia, where there are many vulnerable populations to food security.

The first case of the pandemic was reported in Ethiopia on March 03, 2020, and to date, there are more than 100 reported cases almost in a month time. It is expected that the spread may increase until it reaches peak unless strong preventive measures are taken. Cognizant of this fact, the Ethiopian government has been taking several preventive measures including the state of emergency, partial to complete lockdown, quarantine, awareness creation and social protection to minimize the danger of the pandemic. Furthermore, resource mobilization from the community, private institutions and development organizations are going in an organized

form. The government of Ethiopia has considered the probable effect of COVID-19 and to mitigate the effect and build resilience; the government announced a USD 154 million package to bolster health care and tax exemptions of imported products for the prevention and containment of COVID-19. The National Bank of Ethiopia (NBE) will avail 15 billion ETB liquidity in support of private banks, to allow them provide debt relief and refinancing to customers in need (World Bank, 2020b).

Such measures may continue depending on the intensity of the disease. However, there can be food security and agricultural risks emanating from the COVID-19 crisis unless clear directives and decisions for mitigations are outlined. Therefore, there is a need for careful planning in food supply considering the various actors along the food value chain and mainly on an inclusive basis, considering the vast, vulnerable groups of the nation to food insecurity. In connection with this, a team of researchers from Haramaya University, Ethiopia, compiled a brief synthesis of experts view on the impact of COVID-19 on Ethiopian food supply chains and its mitigation measures based on desk review from the experience of other countries and local observations, to inform the government, stakeholders and community possible ways of reducing COVID-19 related risks on agriculture and the food supply chains. The document contributes to the available information on the impact of COVID-19 on food supply chains and mitigation strategies for developing countries. It is a comprehensive document taking into account the possible effects on the major stages of food supply chains including, production, handling and storage, processing and packaging, distribution and marketing, and consumption with possible mitigation strategies for the impact at each stage. The document can help decision making by federal, regional, and local administrations and other stakeholders who are supporting the agriculture and food supply systems of the country. It, however, prioritizes the negative effects of the COVID-19; the potential positive effects are not covered in this document, except the spillovers from the mitigation strategies. Therefore, this paper is a rapid synthesis of experts' desk review and opinions on the probable impact of COVID-19 pandemics on Ethiopian agriculture along the food supply chains.

MATERIALS AND METHODS

A multidisciplinary team of experts involving crop and livestock production experts, food processing experts and socio-economic experts was established for conducting this rapid desk review and expert opinion assessment of the impact of COVID-19 on Ethiopian agriculture and food security. The team shared specific tasks clustered by the thematic topics along the food supply chains. Brainstorming sessions were conducted among the experts to describe the key areas of probable COVID-19 impact and sort specific mitigation strategies. Relevant up-to-date documents were retrieved from blogs and relevant websites, to supplement the expert opinions. The primary data sources are therefore mainly expert opinions and judgments, and that of secondary data were collected through review of materials published on lessons learned from previous pandemics as well as short notes and expert opinions published by different reputable sources such as International Food Policy Research Institute (IFPRI), Food and Agriculture Organization of the United Nations (FAO), International Livestock Research Institute (ILRI), World Bank (WB), United Nations Office for the Coordination of Humanitarian Affairs (OCHA), World Health Organization (WHO) and Ethiopian Economic Association (EEA). However, as the COVID-19 is a recent phenomenon and under investigation, very little literature directly dealing with its effects on agriculture is available. Therefore, to address the evidence gap, the experts team conducted several triangulation and cross-checking validations for ensuring the validity of the opinions. To avoid duplication of concepts by thematic teams of experts, the team members adopted a general framework of food supply chains (Figure 1) with food and nutrition security frameworks. Accordingly, the possible negative effect of COVID-19 and the

adaptation/mitigation strategies were assessed at each food supply chain stages and food security dimensions simultaneously. The synthesis of findings follows a qualitative value chain approach where key concepts are thermalized under each food supply chain stage. Though the team believes that COVID-19 can have positive effects, focus was given to the probable negative effects and their mitigation strategies. However, some measures, if successful, indirectly imply the opportunities from the pandemic outbreak.

The potential impacts of the pandemic and possible mitigations have been assessed considering the implications along the supply chains functions and stages, and each has been elaborated under the following topics:

- Production
- Handling and storage
- Processing and packaging
- Distribution and marketing and
- Consumption level

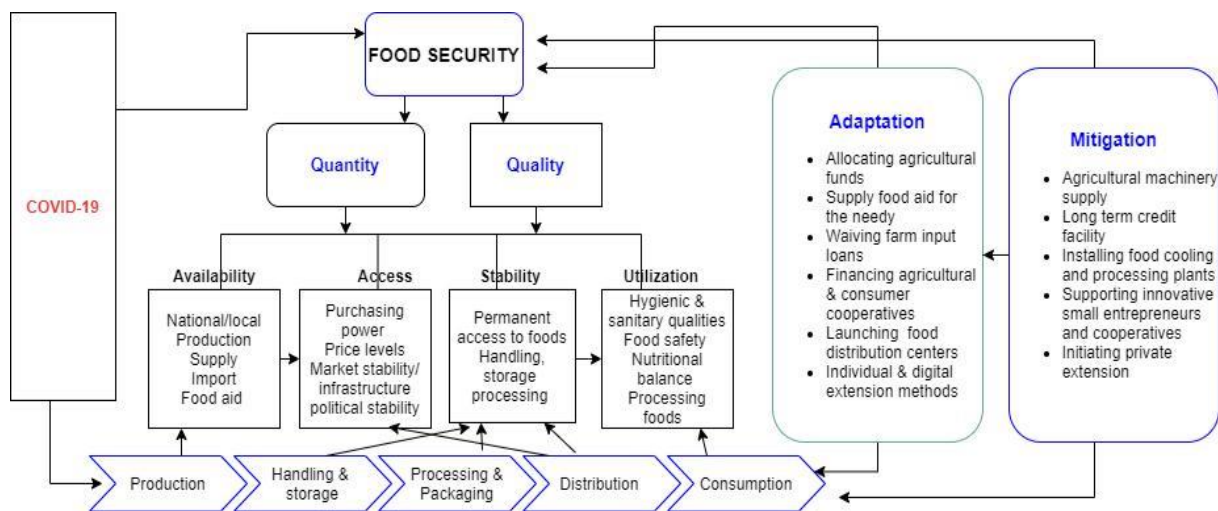


Figure 1: A simple framework linking the probable effects of COVID-19 on food and nutrition security dimensions as well as the food supply chains and the possible mitigation and adaptation strategies.

RESULT AND DISCUSSION

Impact of COVID-19 on Agricultural Production and Potential Mitigation and Adaptation strategy

Movement restriction due to COVID-19 has caused reduction in availability and delay of timely distributions of agricultural inputs; shortage of labor for intensive agriculture; disruption of existing social collaboration among smallholder farmers (Debo, Wonfel, Idir, Equb, etc) for labor sharing during peak agricultural activities. On the other hand, there is labor layoff in floriculture industry as a result of down scaling of farm activities due to absence of market (sudden demand drops in consumer countries) for floriculture products. The government needs to subsidize the commercial farms and encourage them to pay wages to workers to avoid labor layoff. Movement restrictions could also affect the pastoral and agro-pastoral communities since they sustain their livelihood through feed and water searching for their livestock. The livestock sector requires more attention to sustain productivity of animals through planned arrangement of feed stocks (like feed safety net in pastoral and agro-pastoral areas). To avoid water and veterinary medical supply shortages, producing and conserving sufficient feeds for the next season has to be emphasized. The farmers need to focus on family labor as the school closures have made students stay with family which is an added advantage for the farmers to fill their labor gap. The supply of labor saving farm tools/machines suitable to smallholder farmers, promotion of contract farming and irrigated agriculture are some of the important long-term interventions to

boosting production during such crisis period.

The diversion of financial, human and material resources is one of the early actions that the government has taken to limit the potential spread of COVID-19. This, however, could affect the capacity of various actors not to ensure agricultural development and food security in Ethiopia. Therefore, keen attention must as well be given to agricultural development, and the government and donors need to allocate fund to agricultural cooperatives and financial institutions that lend money to the small holder farmers. Relaxing the payback period for agricultural loans for agricultural cooperatives and farmers and establishing agriculture banks/ insurance companies are also possible long-term mitigation measures.

Agricultural research activities in Ethiopia might be disrupted due to budget limitations and restriction of movements. Recognizing relevance of agriculture in achieving food and nutrition security and containing the pandemic, agricultural and food research activities are required to continue, and especially during this crisis period, researchers are expected to prepare rapid response evidence on impact of the pandemic on agriculture. Therefore, proper budgeting is required for running agriculture research activities sustainably.

The COVID-19 pandemic may also have negative effects on local administration decision-making process. During this pandemic period, loose linkage is being observed among the various government bodies, including zonal and district administrators, and among other relevant stakeholders. Therefore, strengthening linkage among the various actors, while also defining clear task and decision-making role of each actor, is required to fill the gap. Enhancing communication using existing IT (e.g., WoredaNet) is also an innovative approach to further strengthen linkage among the various actors.

Impact of COVID-19 on Handling and Storage of Agricultural Products and Potential Mitigation and Adaptation strategy

The other challenge due to restriction of movement in response to COVID-19 is disruption of handling and storage of food which leads to damage of perishable foods like vegetables. Thus, as a short-term intervention, ensuring continuous supply of foods mainly through cooperatives and unions; accessing low-cost handling and storage technologies (e.g., evaporative coolers, crates) and taking measures on social protection due to artificial price hikes could help. In the long-run, however, the country needs to work aggressively to have cold storage rooms for perishables and establish efficient postharvest handling and storage system with improved temperature and ethylene management. Encouraging private investors to open more vendors and malls in main towns could be another intervention area as this could create more market for the perishables.

Impact of COVID-19 on Processing and Packaging of Agricultural Products and Potential Mitigation and Adaptation Measures.

Agro-processing industries, involved mainly in production of foods, are experiencing both negative and positive impacts of COVID-19. Raw milk and fish producers are the major actors negatively affected by the disease. Due to absence of market outlets for processed dairy and fish products, processors are not collecting raw milk and fish at collection centres. Because of this, processing industries either have scaled down or stopped their regular production and supply. However, fresh meat exporting abattoirs are positively impacted by the disease due to increased meat demand in the Middle East countries. The same is true for industries involved in production of shelf stable food products like edible oil, flour, pasta and macaroni, biscuit and other confectionary products which their demands were high in local markets. This is mainly because consumers need to have enough food for their families during such crisis time. The current (short time) observation shows that, shelf stable food producers, meat exporters and

coffee processors are less impacted by the disease. But in long-term, if the disease is not contained properly, all food and other agro-processing industries may experience shortage of raw materials, inputs (packaging materials) and labor forces. Unless and otherwise careful measures are taken very soon, shortage of raw materials and other inputs ultimately result in either down scaling or cessation of production of food items. This could lead to labor layoff, economic crises and food and nutrition insecurity in the country.

Impact of COVID-19 on Distribution and Marketing of Agricultural Products and Potential Mitigation and Adaptation strategy.

Given Ethiopia has poor food distribution and marketing system, the pandemic will have adverse effects on food supply chains supply side as well as the demand side. One of the most important short-term effects is food scarcity in the urban and peri-urban areas. To this effect, strengthening the activities of cooperatives and unions for distribution and increasing access places closer to the consumers are essential as short-term adaptation strategies. Other options that can enhance food availability might include reducing the export of staple food items, importing food in bulk and requesting emergency food aid from humanitarian organizations. Moreover, strengthening the capacity of producer and consumer cooperatives by providing financial resources and thereby stabilizing the prices are important measures that can be put in place to transform the food supply chain from traditional and transitional to modern. Furthermore, it is important to encourage small and micro enterprises to emerge and distribute food, to look for alternative genuine and reliable individual distributors and entrepreneurs.

Impact of COVID-19 on Consumption of Agricultural Products and Potential Mitigation and Adaptation strategy.

There is a reduction in the number of customers in the restaurants, cafés and small and micro-enterprises such as roadside cultural coffee markets. This, in the long-run, can even result in the withdrawal of some of the restaurants and cafés from the economy. To encourage and keep such businesses operating, it would be helpful if the local tax and revenue authorities give them tax exemptions. In the medium and long-run, it is helpful to change their mode of delivery – delivering food at the door of their customers. Consumers may also have low purchasing power due to travel restrictions, layoff, low income and other crises. Mobilization of food banks and efforts by charities and NGOs to deliver food can play critical role to reduce the impact of this crisis. Therefore, organizing and strengthening of daily laborers in group under cash for work to vender food post-COVID-19 might also be essential to reduce the impact on the purchasing power.

CONCLUSION

In conclusion, the current pandemic of COVID-19 has a potential to increase the food insecurity of the country due to resource mobilization towards prevention of the disease, movement restriction subsequently affecting food production, transport, processing and consumption patterns. At the same time, it has created an opportunity of wider social mobilization and variety of innovations towards the prevention of the disease as well as minimizing food insecurity. Thus, the potential impacts of the pandemic on Ethiopian agriculture and food security have to be carefully mitigated and the possible opportunities are tapped for better resilience of the society.

ACKNOWLEDGEMENT

We thank to first almighty Allah and also HUREA (Haramaya University research and Extension Affairs) for material and financial support and technical backup.

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