

## Novel COVID-19 Pandemic and its Global Impact on Food Industry

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### SUMMARY

The World Health Organization (WHO) declared the outbreak of Coronavirus disease (COVID-19, broadly referred to as “coronavirus”) a global pandemic, while thousands of infections and deaths are reported daily. The current article explores the food systems in the era of the COVID-19 pandemic crisis. It provides insights about the possibility of COVID-19 transmission through the food chain. It also highlights the global food security issues arising from the fact that one-third of the world’s population are on lockdown. Finally, it underlines the importance of sustainability in the food chain in order to avoid or reduce the frequency of relevant food and health crises in the future.

### INTRODUCTION

COVID-19 is the official name for the disease caused by the virus SARS COV-2, formerly known as "NOVEL CORONAVIRUS." A new strain from the Corona- Virus Family having high infectivity but low mortality. This pandemic is slowing the global economy to a crawl, but many of the largest economies are taking extra- ordinary measures to propel the crisis into rapid recovery. This considerable disaster shaking not only the world's economy but also the world's politics too which impacts throttling to the global economy and in a week or a couple of months the highly contagious disease has pushed the world to the brink of recession, the outlook to economic growth the Head of International Monetary Fund (IMF) Kristalina Georgieva said that "A recession at least as bad as during the global financial crisis or worse."

As per Food Safety Specialist Food and Agricultural Products Center Ravi Jadeja in OSU marked his word as "The risk associated with Novel COVID-19 in the food industry is low due to the regulatory and third-party audit Good Manufacturing Practices (GMP) requirements that specifically address the exclusion of persons with any infectious diseases from the food-processing environment." Furthermore, the Food Scientist Dr. William McGlynn remarked that "As we continue to learn more about this novel person to person transmission disease, we can take comfort in the fact that our food supply continues to be safe and wholesome, thanks in large part to well- understood and well-proven food safety regulations and practices. Current health guidelines emphasize staying home, limiting social contact, and eating in as opposed to eating out." As per the leading graphed demand for some shelf-stable foods such as canned goods, he said, "Our robust food processing industry should be able to meet these demands and help keep people safe and comfortable during these challenging times. We tend to assume that these sorts of foods have always been readily available and affordable, but of course, that's not the case. Events such as we've seen over the past few weeks remind us that we shouldn't take our food supply for granted."

According to the Food sector related to industry workers, they do not have the opportunity to work from home and are required to continue to work in their usual workplaces. Keeping all workers healthy and safe in the food manufacturing plant and supply chain is critical to surviving the current pervasive. Maintaining the transportation of food is an essential function to which all stakeholders along the food chain need to contribute. This is also required

to maintain trust and consumer stratification in the safety and availability of food. The food industry should have Food Safety Management Systems (FSMS) based on the Hazard Analysis and Critical Control Point (HACCP) principles in place to manage food safety risks and prevent food from any source of contamination. Food industry FSMS are underpinned by prerequisite (PRP's) programs having all the underlying conditions and activities necessary to maintain a hygienic food processing environment. The Codex Alimentations Consortium (CAC) has published General Principles of Food Hygiene for the implementation of basic hygiene controls at each stage of the food manufacturing steps from farm to fork without any contamination & food fraud. Top management of each food sector, including industries; have in liaison with food authorities to protect food handlers from contracting this novel disease and to prevent exposure or transmission of the virus, and to strengthen food hygiene and sanitation practices in their premises.

### **Timeline Event Placed Which Impact on Global Economy**

This pandemic outbreak held on 31 December 2019 in Wuhan city of China (the emerging superpower of the world). Then in January, the outcomes resulted in the United States too, and in the next last week of this month the new cases evolved in France Europe. Once it has been confirmed that the CEO of the spice industry in United States firstly targeted by this contagious virus and from this and it claimed that as industry have three manufacturing plant one rely on china & that transmitted virus could came from there in WUHAN city of china afterwards the Trump President of United States exclaimed his word that CORONA-VIRUS is the name of CHINA- VIRUS. After that, on 30 January 2020, the World Health Organization (WHO) declares this transmitted virus a Global Health Emergency. However, in February 2020, the COCA-COLA COMPANY claimed that the supplier in China had faced some delay in the production and export of nonnutritive sweeteners. For this, they have planned a contingency supply plan. In Feb last week, Italy's Food Industry Trade Association President said that this transmitted virus brought a massive outbreak and a disproportionate effect on the country's economy as a whole. In the same month, New Zealand, who is the biggest exporter of dairy products to China, has faced significant consequences in its economy as a result of this deadly outbreak. In March, the TYSON FOODS United States major meat processor claimed that the transmitted virus had disrupted meat shipments to China.

In April, the Food and Agriculture Organization (FAO) states that globally the food prices fall sharply since March due to the pandemic situation, which brings downfall in the economy of the whole world. Sugar prices are likely hardly hit by falling 19.1% from the previous month. Vegetable oil and dairy prices are also hit. The Senior Economist of FAO states that "The demand factor, not supply largely drive the fall of prices, and the demand factors are influenced by more deteriorating economic prospects" Rice prices comparative to other commodities rose as due to the potential export bans since the third consecutive months which is indeed the alarming point of the world economy.

### **Impact of Novel Corona Virus on Food Business**

It is highly unlikely to say that people can contract this transmitted virus through food or food packaging, as this virus can transmit through respiratory droplets person to person. Till date there no such cases report that causes transmission through food as this virus belongs to that family which can never be multiply in food items. They only need an animal or human body to host their self. Recent studies and researches evaluated the survival of COVID-19 on different surfaces and claimed that virus can viable for 72 Hours on plastic and stainless steel, up-to 4 Hours on copper, and 24 Hours on cardboard although this research study evaluated in lab environment. It is authoritative to all food sectors to reinforce the personal hygiene measures in their respective premises to eliminate the risk from food surfaces. Proper

implementation of Pre- Requisite Programmes in the food sectors helps to protect staff from spreading virus. Proper hand washing after the use of toilets is always an essential practice especially when in contact with food handling, preparation & storage.

As long as the effect of this transmitted virus has been reported the consumer of food & beverages are facing reduced consumption and supply chain disruption challenges. To cope with this situation the beverage industry has made a risk mitigation plan for developing response action and effective plan of work. The staple crops are likely to be less effected by measures to control the deadly virus, as in field the person is to be replaced by machine using work as to avoid any transmission of COVID-19 as per according to the Centre for Disease Control (CDC) Guidelines for limiting the virus. The situation is to be expected in a pandemic tend to take a large toll in global economy the report published by the world bank report stated that this modern pandemic similar to that 1918 Spanish flu would result in 1.9% loss in GDP. According to the current scenario the civil and environmental engineer states that "It's an interesting extreme event in food systems because it's really just a social change event as there's no weather shock or infrastructure failure or short coming, but this virus has much more pervasive impact, it's a bit of different sort of disaster than normal.."

The major impact of this contagious virus is likely to increase food prices as both as a consequence of shortage of food as when the Food Supply Chain (FSC) logistics will increase the transaction cost thus the consumer price will raise however the world's economy has collapsed. This impact will result in unlikely to social rest. The impact of this COVID-19 in food business sector is more likely that after the situation under controlled the more industries to be relocated their strategies to create more opportunities. In considering the gravity of this deadly virus the countries having the high levels of food insecurity are generally more vulnerable and less prepared for an epidemic outbreak and would likely see the higher mortality rates even mal- nutrition increases vulnerability to disease. Fear of spreading this corona virus over the impact on food and drink sectors growing day by day domestically and internationally both.

### **Major Threats to Global Food Security & World Food Programme (WFP) Response**

Groups of people around the globe depend on international trade for their food security as majorly countries move to enact measures aiming to halt the spreading deadly outbreak which impacts the food security and global trade. The spreading transmitted virus can cause breaks in food supply chain, food shortages and food price spikes. The economy of those countries who rely heavily on imported foods faces more disproportionate risk from supply chain failure as the borders closure. Contagious disease called COVID-19 may cause the global economy to gradually collapse into recession, extreme hunger and poverty. As State of Food Security and Nutrition in the world report mentioned as major aspects of impact on poverty and food insecurity. It has been studied that where hunger has increased their economy slow down or contracted. The response of World Food Programme (WFP) who enthusiasm fighting to eliminate hunger and can work even in different difficult areas to provide the assistance for hunger suffering people. The Executive Director of the WFP stated that "As WFP is committed to maintain its excellence, we are in 83 countries, we are in war and conflict and we keep people alive as we can't shut down the headquarters for any reason" As the head quarter of WFP is in Rome, Italy.

### **New Challenges in Food Security- Agriculture and Food Business Economy**

As India is an agricultural country as its geographical location and policy maker have to pay a special attention in this sector vigorously as this sector plays a motherly role in economy which feeds nation and feeding nation become a challenge amidst the spread of this deadly transmitted virus. As recently the borders are closed and there's no trade route in or out between the countries resulted in food insecurity and challenge is to ensure farmer to grow more food for nation in amidst supply chain disruptions. The challenge is to ensure the availability

of rural work force and provide them a full hygiene safety to cope the situation.

In this era of crisis, the companies have to establish act across five horizons, may called 5R:

- **Resolve:** Immediate address the challenge if COVID- 19 represent in any area of own premises.
  - **Resilience:** Quickly address the nearby team to cash management challenges and broader resiliency issues during contagious virus lock down or economic knock out.
  - **Return:** Create smooth plan to return activities after reopening of lockdown and economic knock on effects to become clearer business scale.
  - **Re-imagination:** Re-imagine the next normal that what the implications to be made to reinvent the graph scale.
  - **Reform:** Be clear that how the competitive and regulatory environment in business may shift.
- Consumer Product Leader also defines three dimensions to manage the current scenario crisis they are, Respond, Recover and Thrive.

## CONCLUSION

As this COVID-19 is a deadly outbreak across the globe and due huge cases were reported and majorly others are reporting, millions of deaths occur across the world. In this wake of worst pandemic FSSAI issued notification letter for the consumers, food business owner & stakeholders to ensure the food safety by following precautions and major steps of Food Safety Management System (FSMS) and its part of Hazard Analysis Control Point (HACCP) with complete Pre Requisite Programmes as guided to overcome the spreading of this highly transmitted contagious virus. National Action Plan (NAP) has been directed for the first time against to COVID-19. The success of that plan depends on very well coordinated approach at national, provincial, and regional levels. True dedication, perfect planning and ideal monitoring evaluation gives an amazing outcome.

## REFERENCES

- Amir., H. 2020. Corona Pandemic has set stage for China's ascendance? Global Village Space. <https://www.globalvillagespace.com>
- Anonymous. 2020. Impacts of COVID-19 on the Food Industry. <https://www.qualityassurancemag.com>
- Anonymous. 2020. Timeline: Impacts of COVID-19 on the global food industry. Ingredients Network. <https://www.ingredientsnetwork.com>
- CDC. 2020. If You Are Sick or Caring for Someone. <https://www.cdc.gov/coronavirus/2019-ncov/if-you-are-sick/index.html>
- FAO. 2020. COVID-19 pandemic – impact on food and agriculture. <http://www.fao.org/2019-ncov/q-and-a/impact-on-food-and-agriculture/en/>
- Masters., J. 2020. Coronavirus: How Are Countries Responding to the Economic Crisis? Council of Foreign Relations. <https://www.cfr.org>
- Poppick., L. 2020. The Effects of COVID-19 Will Ripple through Food Systems. <https://www.scientificamerican.com>
- World Health Organization. (2020). Coronavirus disease 2019 (COVID- 19): situation report, 72.
- World Health Organization. (2020). COVID- 19 and food safety: guidance for food businesses: interim guidance, 07 April 2020 (No. WHO/2019-nCoV/Food\_Safety/2020).