

Novel Covid19 and Challenge of Food Security and Food Safety

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Introduction

Coronaviruses are enveloped RNA viruses that are distributed broadly among humans, other mammals, and birds and that cause respiratory, enteric, hepatic, and neurologic diseases. The illness likely to have been caused by this CoV was named "novel coronavirus- infected pneumonia" (NCIP).

In late December 2019, several local health facilities reported clusters of patients with pneumonia of unknown cause that were epidemiologically linked to a seafood and wet animal wholesale market in Wuhan, Hubei Province, China. Human airway epithelial cells were used to isolate a novel coronavirus, named 2019-nCoV.

Four viruses - 229E, OC43, NL63, and HKU1 - are prevalent and typically cause common cold symptom immunocompetent individuals. The two other strains - severe acute respiratory syndrome coronavirus (SARS-CoV) and Middle East respiratory syndrome coronavirus (MERS-CoV) - are zoonotic in origin and have been linked to sometimes fatal illness.

SARS-CoV was the causal agent of the severe acute respiratory syndrome outbreaks in 2002 and 2003 in Guangdong Province, China. MERS-CoV was the pathogen responsible for severe respiratory disease outbreaks in 2012 in the Middle East.

Signs and symptoms

The Centers for Disease Control says the symptoms of the virus include fever, cough and shortness of breath. Symptoms can appear in as few as two days or as long as 14 days after exposure.

Detection and isolation of a novel coronavirus

Next-generation sequencing and bioinformatics are changing the way we can respond to infectious disease outbreaks, improving our understanding of disease occurrence and transmission, accelerating the identification of pathogens, and promoting data sharing. Evidence for the presence of this virus includes identification in bronchoalveolar-lavage fluid in three patients by whole-genome sequencing, direct PCR, and culture. We used a combination of Illumina sequencing and nanopore sequencing to characterize the virus genome.

Novel coronavirus and food safety

There is no evidence that COVID-19 is transmitted through food. Maintaining good hygiene practices is recommended. Anyone with suspected symptoms of respiratory illness should avoid preparing food for other people. Businesses need to follow any social distancing requirements requested by the Australian Government.

Can COVID-19 be transmitted through food?

COVID-19 is not a foodborne disease. There's no evidence that COVID-19 can be transmitted through food and no reported cases of COVID-19 have been linked to contamination of food. The main risk of transmission is from close contact with infected people. The best approach is to practice social distancing and to maintain good personal hygiene at all times. Wash your hands regularly with soap and water and avoid touching your face to reduce your risk.

Do I need to wash my fruit and vegetables before use?

It is always a good idea to wash fresh fruit and vegetables under running water before eating.

Use of soap, disinfectants or detergents to wash your food is not recommended. These cleaning products are not designed for human consumption and may actually be unsafe to use with food.

Is meat safe?

It is suspected COVID-19 may have originated in animals. It is not likely to be transmitted to humans from meat in Australia. WHO recommends cooking meat properly and not eating any meat from diseased animals. In Australia all meat sold is subject to strict controls, including requirements that prohibit the use of meat and offal from diseased animals for human consumption. As such, it is unlikely that extra precautions need to be taken for meat in Australia to prevent COVID-19 transmission.

Is there a risk of COVID-19 transmission from food packaging?

Food packaging is not known to present any specific risk of transmission. It is not yet confirmed how long this virus survives and/or remains detectable on surfaces but studies suggest it may be between a few hours and up to several days depending on the type of surface, temperature and humidity of the environment. Surfaces can be sanitised with common household disinfectants (e.g. alcohol-based sanitiser or bleach).

General Recommendations

- A comprehensive media campaign should be launched at the national level to create awareness and educate the general public that the consumption of milk, meat (chickens, beef and mutton) and eggs is not only safe but also significantly helps in boosting the immune system for combating the imminent coronavirus infections.
- To declare livestock and poultry farming as “priority sector” and to offer immediate financing for working capital either as soft loans or on special discounted rates.
- To defer electricity bills of small and large farmers at least for one month. The payments should be taken in three months’ installments once the emergency is over.
- Govt. should abolish the customs duties, sales tax and income tax on the import of raw materials and machinery/equipment required for livestock and poultry industries for at least three years.
- Necessary directions should be passed on to law enforcement agencies to facilitate personnel involved in the logistics of food materials of all kinds on national and local routes.

- To ensure un-interrupted milk, meat, and egg supply chain in the country from villages to urban households. However, the required SOPs can be devised to avoid the spread of disease.
- Equal incentives should be given to all stakeholders i.e. poultry, meat, and dairy industries to maintain equilibrium.

Recommendations for dairy and meat industries

- Zero-rating regime for the dairy sector should be resumed immediately.
- Tax exemptions/special tax packages should be given to revive the livestock farming production systems.
- To safeguard the rights of local farmers and boost local production in this emergency, an immediate ban on the import of skimmed powder be implemented.
- The animal “mandies” must be open and fully functional to ensure a fully efficient livestock supply chain.
- Urgent measures should be taken to provide a subsidy on wanda up to 25% for the next three years.
- The Govt. should engage the processing companies especially “Milk powder plants” to buy and process the excessive or unsold milk from farmers to convert it to powder which can be used in the future.
- The required measures, related to biosecurity, should be extended to ensure the safety of farmworkers.
- There is a need to continue all veterinary services to livestock farms including vaccination, disease prevention, diagnostic, treatment, etc. even with more rigor which are presently halted.

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