Coronavirus risk to UK consumers via shellfish and crops grown on land treated with sewage sludge - Risk assessment

Area of research interest: Foodborne pathogens

Background

To supplement the overall Risk Assessment in relation to COVID-19 and food, the FSA was asked to consider the potential risk that virus present in sewage could contaminate bivalve shellfish via wastewater effluent and crops via sewage sludge. This assessment was conducted to improve our ability to respond to public queries about shellfish and was not commissioned due to a substantial level of concern about these pathways.

Overall risk estimate

We consider that the overall risk to UK consumers via the consumption of bivalve molluscs originating in UK waters is very low, with a high level of uncertainty due to the current lack of data specific to SARS-CoV-2, and that the risk to UK consumers via the consumption of food grown on arable land treated with sewage sludge is Negligible with Low uncertainty.

Uncertainties

Key uncertainties include:

- The incidence of infection in the population;
- The percentage of infected individuals that are shedding viable viral particles;
- The infectivity of viral particles detected in stool;
- The rate of inactivation of SARS-CoV-2 in sewage/wastewater and seawater;
- The effectiveness of wastewater treatment in removing potentially viable virus;
- The relative dilution between virus present in wastewater outflow and virus coming into contact with shellfish production areas;
- The potential for SARS-CoV-2 to bind and accumulate within the digestive tracts of bivalve molluscs;
- The rate of inactivation of SARS-CoV-2 within bivalve mollusc digestive tracts;
- Whether consumption of virus is a route of infection for SARS-CoV-2 and the relationship, if any, between ingested dose and infection.

Research report

England, Northern Ireland and Wales

PDF
View Coronavirus risk to UK consumers via shellfish and crops grown on land treated with sewage sludge - Risk assessment as PDF(Open in a new window) (257.64 KB)