

Qualitative assessment of the risk of SARS-CoV-2 to human health through food exposures to deer in the UK: Statement of purpose

Results available: Results available

Area of research interest: [Research projects](#)

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Authors: Erica Kintz, Erin Lewis, Victoria Cohen

Conducted by: Food Standards Agency

DOI: <https://doi.org/>

Planned completion: 9 March 2023

Project status: Completed

Date published: 9 March 2023

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Risk question

What is the risk to UK consumers from exposure to SARS-CoV-2 via handling and/or consumption of products originating from UK wild/captive deer populations?

In scope

- Deer meat and offal sold at retail
- Deer meat and offal produced by hunters for personal consumption
- Deer meat and offal sold for raw pet food

Out of scope

- Deer meat and offal imported into the UK from other countries
- Exposure from the slaughter or butchery of deer (covered by the UKHSA/PHS risk assessment “Qualitative assessment of the risk of SARS-COV-2 to human health through non-food exposures to deer in the UK” (UKHSA and PHS 2022))
- Deer meat/offal contaminated with SARS-CoV-2 by infected food workers (considered more generally in the FSA’s [overarching SARS-CoV-2 risk assessment](#) (FSA 2020))
- Infection in any species other than humans from consumption of SARS-CoV-2 contaminated deer meat or offal

Key assumptions

This risk assessment assumes a scenario where SARS-CoV-2 becomes established in UK deer populations. The risk of this occurring is covered in the risk assessment “What is the risk of SARS-CoV-2 being introduced into the cervid population in Great Britain?” (Defra 2022).

Background

SARS-CoV-2, the coronavirus responsible for the infectious disease COVID-19 ([Gorbalenya et al 2020](#)), was first detected in the human population in December 2019 ([Zhu et al 2020](#)). It has since spread to become a global pandemic. Previously, two other novel coronaviruses caused illness in the human population. The first, SARS-CoV (for Severe Acute Respiratory Syndrome) was recognised as a new illness in 2004 and the second, MERS-CoV (for Middle East respiratory syndrome) in 2012 (de Wit et al. 2016).

These previous coronavirus outbreaks in humans occurred after bat coronaviruses passed through intermediate hosts (civet cats and camels, respectively) and then transmitted to infect humans (de Wit et al. 2016). SARS-CoV-2 infections in companion animals such as dogs, cats and ferrets and also in captive or farmed animals such as tigers and mink have been observed, likely as spill over events from contact with infected humans (WOAH 2022). There is now a large body of evidence from the United States that SARS-CoV-2 is capable of infecting white-tailed deer and that it can then spread further in the deer population (details in “What is the risk of SARS-CoV-2 being introduced into the cervid population in Great Britain?” (Defra, 2022).

Assuming a worst-case scenario where SARS-CoV-2 is circulating within the UK deer population, this risk assessment was performed to determine whether handling and/or consuming UK-produced deer meat and/or offal may pose a risk of contracting SARS-CoV-2 in humans.