



Seismo Info 12/2020



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The FSVO compiles the most important food safety information every month:

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★★★★ very important info ★★★ important info ★ interesting info

Food trends

★★★★ **COVID-19:** The Federal Food Safety and Veterinary Office (FSVO) has published the results of an **online survey on eating habits during the semi-lockdown period** in spring 2020. In this survey, 1,000 people throughout Switzerland were questioned on their eating habits, their consumption of certain foods, meal preparation and emergency supplies. [FSVO](#), 90 pages. (01.10.2020). A recent international survey also set out to find out more about the impact of the crisis on consumer **purchasing behaviours**, focusing on differences between geographical regions and product categories. [FoodNavigator](#), 2 pages. (26.10.2020).

★★★★ **Melatonin:** Recent publications report that melatonin can be used to **extend the shelf life of vegetables** such as cabbage and broccoli, as well as mushrooms. Melatonin is not an authorised additive in Switzerland. [Food-ResearchInternational](#), 11 pages (12.2020), [PostharvestBiologyAndTechnology](#), 7 pages (01.2021), [FoodChemistry](#), 9 pages (03.2021).

★ **“Superfoods”**: Chia seeds, goji berries or quinoa – 48% of the population see so-called “superfoods” as part of a **health-conscious diet**. This is shown by a recent representative survey by the German Federal Institute for Risk Assessment (BfR). [BfR](#), 2 pages. (18.11.2020).

★ **“Dragon’s Breath”**: The German Federal Institute for Risk Assessment (BfR) has published an assessment of a new food trend called “Dragon’s Breath”, which involves **servicing food frozen with liquid nitrogen** (at -196°C). During consumption, the eater’s own breath is meant to resemble the eponymous “dragon’s breath” – a showy effect caused by the low temperature of the liquid nitrogen. According to the BfR, possible health risks when eating these products include **injuries to the tongue or oral mucous membranes**, as well as **damage to teeth**. [BfR](#), 2 pages. (25.11.2020).

Unusual outbreaks

★★★ **Hepatitis A**: More than 20 people have been infected with hepatitis A in an outbreak in a German municipality. Investigations by the health department and food control authorities are concentrated on the employees of a bakery branch in the region that officials did not name but have temporarily closed. [FoodSafetyNews](#), 1 page. (18.11.2020).

★★★ **Salmonella Bovismorbificans: 26 cases of salmonellosis** caused by *Salmonella* Bovismorbificans, 17 of which concerned children, were identified in France in October and November by the National Reference Centre for Salmonella. The people had all eaten **dried sausage** bought in the same store. [FoodSafetyNews](#), 1 page. (29.11.2020).

★★ **Salmonella Stanley in mushrooms**: End of the outbreak in the USA (see Seismo Info 10/2020). A total of **55 people** in 12 states were infected with *Salmonella* Stanley after eating imported dried wood ear mushrooms; **6 hospitalisations** were reported, but no deaths. [CDC](#), [FDA](#), 1 page. (04.11.2020).

★★ **E. coli O157:H7**: The Centers for Disease Control and Prevention (CDC) and the Food and Drug Administration (FDA) are announcing a **third outbreak** of *E. coli* O157:H7 infections, in addition to the two outbreaks reported previously (*Seismo Info 11/2020*). In this third outbreak, 12 people were infected in 6 states, 5 of whom were hospitalised. No deaths were reported. [CDC](#), 1 page. (10.11.2020).

Food safety

★★★ **Mycotoxins**: The FSVO has published a new **briefing letter** on the topic of mycotoxins. Briefing letters are informative fact sheets on a subject chosen from the area of food safety. [FSVO/Early detection](#). 2 pages. (20.10.2020).

★★★ **Yersinia enterocolitica**: A systematic review of sporadic cases of *Yersinia enterocolitica* infection has been published to determine the **risk factors associated with infection**. Consumption of **pork meat** and untreated **drinking water** were the main determinant of sporadic infections with this pathogen. [MicrobialRiskAnalysis](#), 36 pages. (05.11.2020).

★★★ **Shellfish**: The Galician Emerging Food Safety Risks Network (RISEGAL) has applied a systematic approach for the identification of **emerging risks** potentially affecting **bivalve shellfish**. The study determined that **perfluorinated compounds**, **antimicrobial resistance**, **Vibrio parahaemolyticus**, **hepatitis E virus (HEV)** and **antimicrobial residues** are the emerging hazards that are considered most imminent and severe. [MPDI](#), 16 pages. (10.11.2020).

★★ **Bacillus cereus**: An assessment by the German Federal Institute for Risk Assessment (BfR) has concluded that **every presumed strain of B. cereus is capable of producing toxins**, although the types and quantities of toxins produced vary from strain to strain. These toxins can cause **gastrointestinal diseases** that can affect people of any age, are not contagious and rarely last for more than 24 hours. Cases of serious illness are very rare. [BfR](#), 21 pages. (30.10.2020).

★★★ **STEC and venison:** Scottish food safety agency Food Standards Scotland has published a report on the risk of STEC (Shiga toxin-producing *Escherichia coli*) contamination of **wild venison**. Although the **prevalence** of STEC in wild deer is **low**, the report found that, where there is contamination, the strain isolated is associated with the **most severe forms** of human disease. [FoodStandardsScotland](#), 66 pages. (02.11.2020).

★★★ **Listeria monocytogenes:** The survival and virulence of *L. monocytogenes* was assessed during **storage on three low-moisture foods**: chocolate liquor, cornflakes and dry-roasted pistachios. Long-term survival was found for *L. monocytogenes* with a greater reduction at 23°C than at 4°C. After storage at 4°C, *L. monocytogenes* also **remained infectious** on certain products. These results support the addition of low-moisture foods to questionnaires conducted during listeriosis outbreaks. [JournalFoodProtection](#), 11 pages. (11.2020).

★★★ **Cyclospora:** A US company has issued a limited, voluntary recall of approximately 15,000 packages of **fresh organic basil** from Colombia due to a possible health risk linked to contamination with the **parasite Cyclospora**. [FDA](#), 1 page. (24.11.2020).

Food fraud

★★★ **Traceability:** A research team from the University of Tokyo has developed a new system for fighting food fraud “from farm to table” thanks to a **mobile ingredient tracing system** based on **QR codes**. The system enables consumers to scan a ready-made meal’s QR code and find out the origin of all the individual ingredients. [EurekAlert!](#), 1 page. (02.11.2020). Original publication: [Nature Food](#).

★★★ **Honey:** With European honey harvests **down 40%** in 2020, Copa and Cogeca (the unions of farmers and their cooperatives in the EU) warn “the survival of professional beekeepers is threatened” and call on European regulators to **increase controls on cheaper imports** that, they say, are a food **fraud** risk. [FoodNavigator](#), 1 page. (09.11.2020). [Copa/Cogeca](#). A recent publication presents a view of all the **different types of honey adulteration** and **detection methods** and reviews the impact of honey adulteration on **human health**. [MDPI](#), 21 pages. (21.10.2020).

Close up

★★★ **Toxicology:** At the request of the Federal Food Safety and Veterinary Office (FSVO), Tox Info Suisse has evaluated the enquiries concerning **food supplements, slimming foods** and **foods for athletes** received over the past six years. The number of enquiries relating to these products has increased significantly in recent years. Around two thirds of these concerned acute, unintentional intakes by young children, while in adults, **caffeine** was the leading substance in terms of frequency and severity of symptoms. [FSVO](#), 31 pages. (30.10.2020).

★★★ **Emerging risks:** The European Food Safety Authority (EFSA) has published a report detailing the agency’s activities on **emerging risks in 2019**. In total, **17 potential emerging issues** were discussed during the year. Thirteen were concluded to be emerging issues. [EFSA](#), 73 pages. (17.08.2020).

★★★ **COVID-19:** The World Health Organization (WHO) says the **risk of catching COVID-19 from frozen food is low**, but China has repeatedly sounded alarms after detecting the virus on packaging of products ranging from German pork knuckles to Ecuadorian shrimp. [Reuters](#), 2 pages. (13.08.2020).

★★★ **COVID-19:** A new study analyses the **impact of COVID-19 on food safety** throughout the food supply chain. A survey was conducted in 16 countries involving 825 food companies. Among others, the study found that **staff awareness** and **hygiene measures** are the most important attributes in combating COVID-19. [ScienceDirect](#), 25 pages. (01.12.2020).

★★★ **Campylobacter:** The European project “Campylobacter-Specific Nullification via Innovative Phage-mediated Enteropathogen Reduction (C-SNIPER)” led by AZTI, a technology centre in Spain, is focusing on the de-

velopment of a **bacteriophage-based solution** to control *Campylobacter* in poultry production. After one year of the project, a **prototype** has been obtained, optimised and put into production at a pilot scale. [FoodSafetyNews](#), 1 page. (09.11.2020). [AZTI](#).

★★ **Trans fatty acids:** An Australian modelling study has shown that **banning trans fatty acids** from the food industry could prevent around **2,000 deaths and 10,000 heart attacks** in Australia over the first ten years and up to 42,000 deaths from heart disease over the lifetime of the adult population. [EurekAlert!](#), 1 page. (02.11.2020).

★★ **Climate change:** A new publication synthesises 30 years of data to grasp how global **crop production** may be impacted by **rising CO² levels** and other factors. The study portends a **less optimistic future** than the authors' previous review published 15 years ago. [ScienceDaily](#), 2 pages. (02.11.2020). Original publication: [GlobalChangeBiology](#), 23 pages.

★★ **Pathogenic viruses:** A Swedish study analysed influent wastewater and wastewater treated at a treatment plant. The results indicate that this **water contains a high variety of human viral pathogens** with seasonal variability when followed for 1 year. The peak of the amount of 11 different viruses in the wastewater preceded the peak of the number of diagnosed patients by 2 to 4 weeks. Despite the treatment of wastewater, up to 5 log₁₀ virus particles per litre were released into the surrounding river. [AppliedAndEnvironmentalMicrobiology](#), 1 page (abstract). (09.10.2020).

★★ **Vegetarian fish:** A study found that a **new algae-based fish feed formula** not only cuts aquaculture's environmental footprint, but also produces larger, healthier fish. [Anthropocene](#), 2 pages. (13.11.2020).

★ **Meat:** A team of scientists led by Nanyang Technological University, Singapore, has invented an **artificial olfactory system** that mimics the mammalian nose to **assess the freshness of meat accurately**. The "electronic nose" (e-nose) comprises a "barcode" that changes colour over time in reaction to the gases produced by meat as it decays, and a barcode "reader" in the form of a smartphone app powered by artificial intelligence (AI). [EurekAlert!](#), 2 pages. (10.11.2020). Original publication: [AdvancedMaterials](#), 8 pages.

Principal sources: SEISMO; HorizonScan; Safefood.ai.

Send your questions and suggestions to the following e-mail address: seismo@blv.admin.ch

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Seismo Info 11/2020



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Food trends

★★★★ **COVID-19 and allergens: Direct-to-consumer sales and online ordering** have been given a significant boost by the coronavirus pandemic and subsequent business closures. It is incumbent that food businesses are aware of their responsibilities when it comes to **allergen** labelling. [FoodNavigator](#), 2 pages. (09.10.2020).

★★★★ **Mycotoxins: Graphene oxide** and its composites seem to be a promising tool for capturing and **removing mycotoxins** from contaminated food and feed without creating health risks or decreasing the quality of products. [FoodControl](#), 9 pages. (Publication March 2021).

★★★ **Vertical farming:** A pilot **vertical agricultural production** (vertical farming) plant is currently being built in Zurich. The stacked structure should make it possible to increase productivity by a factor of 10 to 15 per m² and to **reduce water consumption** by 90%, according to the company involved in the project. **No pesticides**, or only very small quantities, will be used. The company also states that indoor production will enable plants to grow 24 hours a day, 365 days a year. [FoodAktuell](#), 1 page. (22.10.2020).

★★ **Sale of loose goods:** Loose goods are products presented for purchase **without packaging**. Customers serve themselves, only taking the quantities they would like, putting products into their own containers or ones provided by the business. From large stores to specialist shops, **buying products loose is experiencing an unprecedented boom**. [MinistèreDeL'AgricultureEtAlimentation](#), 1 page. (06.10.2020).

★ **Cell-cultured meat:** A group of researchers have genetically engineered cow muscle cells to produce **plant nutrients** not natively found in beef cells. They coaxed bovine cells into producing **beta carotene** – a provitamin usually found in carrots and tomatoes. In doing so, they demonstrated that cell-cultured meat might be able to surpass the **nutritional profile** of conventionally farmed meat. [EurekAlert!](#), 1 page. (15.10.2020). [MetabolicEngineering](#), 12 pages.

Unusual outbreaks

★★★ **Salmonella Typhimurium and Salmonella Anatum:** Since 1 August 2019, an outbreak of toxigenic infections caused by *S. Typhimurium* ST19 and *S. Anatum* ST64 has affected three European Union countries, the United Kingdom and Canada. As of 20 October 2020, **123 cases** of *S. Typhimurium* ST19 and one case of *S. Anatum* have been reported. **Brazil nuts** and **nut bars** have been identified as likely sources. [ECDC](#), 1 page. (21.10.2020).

★★★ **Salmonella Typhimurium and Salmonella Newport:** Since the summer, the French health authorities have been investigating clusters of human cases of salmonellosis linked to eating raw or undercooked horse meat. As of today, **48 cases have been reported:** 20 linked to *S. Newport* and 28 to *S. Typhimurium*. In France, there is a tradition of consuming **raw or rare horse meat**, especially in the form of minced (ground) meat. [FoodSafetyNews](#), 1 page. (13.10.2020). Update: 2 deaths have been reported. [SantéPubliqueFrance](#) (in French). (19.10.2020).

★★★ **Shigella:** A shigellosis outbreak in Denmark that made more than 40 people ill was likely caused by **imported fresh mint**. In August and September, **44 people** between 0 and 75 years old became ill. The majority of patients had eaten fresh mint bought at local greengrocers or bazaars in and around the Copenhagen area. Because of the herb's short shelf life, it is thought there is no longer any contaminated product on the market. [FoodSafetyNews](#), 2 pages. (14.10.2020).

★★ **Salmonella Newport in onions – end of the outbreak in the USA:** The Centers for Disease Control and Prevention (CDC) reports that the outbreak associated with American onions has ended in the USA (the end of the outbreak in Canada was reported in *Seismo Info 10/2020*). In total, there were **1,127 confirmed cases** of *Salmonella* Newport illness linked to this outbreak in the **USA**. [CDC](#), 1 page. (08.10.2020).

★★ **E. coli O157:H7:** The Centers for Disease Control and Prevention (CDC) and the Food and Drug Administration (FDA) are investigating **two outbreaks** of *E. coli* O157:H7 infections in several states. No specific food item has yet been identified as the source of the outbreak in either of the two cases. [CDC](#) (outbreak 1), [CDC](#) (outbreak 2), 1 page. (28.10.2020).

★ **Legionellosis:** In Ortona, in the region of Abruzzo (Italy), **three people have died** of a *Legionella* infection; as of today, **nine people** (including those who died) have been contaminated. [LaRepubblica](#), 1 page. (01.11.2020).

Food safety

★★★ **Listeria monocytogenes and Escherichia coli:** Between December 2018 and April 2019, 1,050 **frozen fruit and vegetable** samples were collected in **England**. Eleven samples (1%) contained ≥ 100 cfu/g of *Escherichia coli*; *Listeria monocytogenes* or other *Listeria* species were detected in six samples (2%) of fruit compared to 167 samples (24%) of vegetables and six samples (26%) of fruit and vegetable mixes. ***L. monocytogenes* was present in 10% of frozen vegetables**. [InternationalJournalOfFoodMicrobiology](#), 12 pages. (December 2020).

★★★ **Viral tick-borne encephalitis:** Viral tick-borne encephalitis (TBE) is usually transmitted to humans by the bite of an infected tick. Another possible way to become infected with the viral pathogen is through the consumption of **raw milk and raw milk products**. Based on the seroprevalence of antibodies in goats in the Canton of Valais (Switzerland), a risk assessment for the viral contamination of goat milk was performed for this area. The **probability of virus-contaminated milk** was calculated to range between **0.0012%** and **0.024%**. [JournalOfFoodSafetyAndFoodQuality](#), 1 page (abstract). (2020).

★★★ **Staphylococcus aureus:** The formation of **staphylococcal toxins** in **hard cheese** is expected to be very unlikely because of the high scalding temperatures used during production. However, this assumption has not been scientifically tested. A laboratory-scale cheese production experiment has shown that, contrary to expectations, **staphylococcal toxin** formation occurs and differs according to the strain type and temperature. [JournalOfFoodProtection](#), 7 pages. (25.09.2020).

★★ **Mycotoxins:** As part of a **monitoring** project in collaboration with Agroscope, Swiss Granum is keeping track of the risk of **cereals** becoming contaminated with mycotoxins before and after harvesting. Contaminations of bread wheat, as well as barley and triticale, with **deoxynivalenol** are at their **lowest level** this year since monitoring was implemented. [SwissGranum](#), 7 pages. (15.10.2020).

★★ **Enterocytozoon bieneusi in raw milk:** *Enterocytozoon bieneusi* is one of the most prevalent **pathogenic fungi** in a wide range of vertebrate hosts, causing diarrheal disease. In a study of **dairy farms** in Turkey, the overall prevalence of *Enterocytozoon bieneusi* in raw milk of dairy animals was determined as 10.2%. [InternationalJournalOfFoodMicrobiology](#), 7 pages. (12.2020).

★★ **Anisakis in fish:** Several recent publications concern cases of human or **allergic anisakidosis** caused by **eating Anisakis larvae** parasitising fish. French food chain surveillance platform bulletin 'Bulletin de la Plateforme de Surveillance de la Chaîne alimentaire' (BuSCA) has reviewed this parasitism. [BuSCA](#), 2 pages. (08.2020). A new publication concludes that, despite the increase in consumption of raw fish, cases of anisakidosis are decreasing, but their **allergenic potential is increasing**. [BullAcadNatlMed](#), 8 pages. (05.10.2020).

★★ **Enteric viruses in drinking water:** A Portuguese study has surveyed a group of enteric viruses (**enterovirus, norovirus genogroups I and II, and hepatitis A virus**) in two sources of drinking water, also evaluating their elimination in two water treatment plants. These results recommend the **monitoring** of enteric viruses over time and their inclusion in the **quality analysis** in drinking water production. [MDPI](#), 18 pages. (11.10.2020).

★★ **Sweets infused with cannabis (THC):** Parents have been warned about cannabis-infused sweets “**50 times stronger than a joint**” for sale online that are almost identical to regular sweets. Having eaten them by mistake, **13 children had to be hospitalised**. [MailOnline](#), 2 pages. (07.10.2020).

★★ **Campylobacter:** Campylobacteriosis incidence exhibits **seasonality** that has been attributed to ambient temperature. However, the role of temperature remains poorly understood. To examine the impact of ambient temperature on campylobacteriosis, weekly incidences in Germany were analysed. The study concludes that **vectors or human behaviour** outweigh the direct temperature-pathogen relationship when the whole chain of infection is considered. In the context of **climate change**, campylobacteriosis is likely to increase in Germany. [Nature](#), 12 pages. (14.10.2020).

Food fraud

★★★ **Frozen berries:** Low-cost frozen berries grown in China were being shipped to a plant in central Chile where they were **repackaged as premium Chilean-grown organics**, then shipped to **consumers in Canadian cities**. At least USD 12 million worth of mislabeled raspberries were sent to Canada between 2014 and 2016. [Reuters](#), 1 page. (06.10.2020).

★★★ **Ciguatoxin:** Recurring instances of ciguatoxin poisoning in the EU were associated with the consumption of mislabeled imported **tropical fishes**. A study has correlated the species identity of 975 imported fishes with their risk of causing ciguatera intoxication. Based on DNA sequence analysis and a review of specimen photographs, an **overall mislabeling rate of 31%** was determined. [FoodControl](#), 9 pages. (Publication March 2021).

★★ **Herbs and spices:** A study has revealed that just over 25% of all the samples of **sage** tested were **adulterated**. The level of contamination of the samples with non-food materials such as olive leaves ranged from 29% to 58%. The levels of **pesticides** were higher in adulterated herbs than in the authentic products. [NewFoodMagazine](#), 1 page. (21.10.2020).

★★ **Wine:** The Italian Guardia di Finanza (GDF) has arrested two people and is investigating 11 other suspects in connection with the “sophisticated and accurate” **falsification** of bottles of **Italian wines**. The counterfeiters are thought to have been producing around 700 cases a month, which were being sold at a 70% discount in comparison with genuine bottles to customers in China, South Korea and Russia. [SecuringIndustry](#), 1 page. (16.10.2020).

Close up

★★★ **RASFF:** The RASFF Annual Report 2019 shows that **cooperation between Member States has been further reinforced**. In total, **4,118 notifications** of food- or feed-related risks were transmitted by the Member States of the European Commission last year. This is a slight **increase** on last year, which confirms that companies operating in the food sector and Member States are using the system intensively. [RASFF](#), 56 pages. (2020).

★★★ **Early detection:** It is possible to track and identify **diseases before they spread** using **wastewater surveillance** systems. Many infectious agents are, in fact, excreted in bodily fluids before and during active infection. When these fluids enter sewage systems, they are transported to a central wastewater treatment facility for processing where they can be detected. Putting wastewater monitoring and **social media analysis** together could detect community outbreaks that might have otherwise gone undetected. [MedicalExpress](#), 2 pages. (27.10.2020).

★★ **Risk assessment:** The Food and Agriculture Organization of the United Nations (FAO) has published a guide providing **recommendations** to decision-makers on how to **rank the public health risks** posed by foodborne hazards and/or foods. [FAO](#), 124 pages. (2020).

★★ **Coronavirus:** A study coordinated by the Centers for Disease Control and Prevention (CDC) analyses the coronavirus disease (COVID-19) among **workers in the food and agricultural industry** in the USA. Among 742 food and agriculture workplaces in 30 states, 8,978 workers had confirmed COVID-19; 55 workers died. **Racial and ethnic minority** workers could be disproportionately affected by COVID-19. [CDC](#), 2 pages. (Publication planned for 01.2021).

★★ **Allergens:** The role of **insects** as a new food allergen is currently being discussed due to their potential for **cross-reaction** with arthropods (including crustaceans and dust mites). A project coordinated by the German Federal Institute for Risk Assessment (BfR) aims to develop **methods** for identifying insect components in food, as well as an **in-vitro test** to determine, with minimal stress for the test subjects, whether they are allergic or only demonstrate sensitisation without clinical reactions. [EurekAlert!](#), 2 pages. (20.10.2021).

★★ **Food safety survey:** According to a poll, up to **60% of people** worldwide are worried the food they eat will **harm their health** in the next two years, while only 15% of people looking for information about food and water safety trust their government to provide it. The survey is based on interviews with 150,000 people in 142 countries in the second half of 2019. [FoodSafetyNews](#), 2 pages. (15.10.2020). [Full report](#), 215 pages.

Principal sources: SEISMO; HorizonScan; Safefood.ai.

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Food trends

★★★ **Mould:** A study by the University of Copenhagen on Danes' perception reports that **mould**-prone foods are considered to be **more natural** than those with long shelf lives. In the past, food safety concerns were more widespread. There was a perception that the greater the sterility, the better the quality. [EurekAlert!](#), 1 page. [University of Copenhagen](#). (10.09.2020).

★★★ **Food sales on social media:** The Food Safety Information Council (FSIC), an Australian food safety information organisation, is warning people of the **potential risks** of buying and selling food on social media websites such as Facebook and WeChat, saying that this practice has **increased significantly** since the lockdown because of the coronavirus pandemic. [FoodSafetyNews](#), 1 page. [FSIC](#), 1 page. (25.09.2020).

★★★ **Novel fish preservation method:** Scientists have developed a **novel active coating** containing chitosan, tea and cinnamon extracts to improve the quality of fish fillets during refrigerated storage. [FoodNavigator](#), 1 page. [Original publication](#), 8 pages. (23.09.2020).

★ **Insect-based protein nutrition:** An English brand is launching a sports protein powder based on **cricket flour**. According to the brand, crickets are naturally rich in protein and iron and represent an environmentally friendly source of protein. [Food Navigator](#), 1 page. (14.09.2020).

Unusual outbreaks

★★ **Hepatitis A:** Following outbreaks linked to **frozen strawberries** in Sweden and Austria in 2018, 65 cases linked to the same hepatitis A virus strain were detected in Germany between October 2018 and January 2020. A frozen **strawberry cake** has been identified as the main vehicle of transmission. Trace-back investigations revealed that the Polish producer involved in the previous outbreaks in Sweden and Austria had received frozen strawberries from Egypt via a wholesaler that also delivered to the manufacturer of the strawberry cake. Continued **molecular surveillance** of hepatitis A is needed to identify outbreaks and monitor the success of interventions. [Eurosurveillance](#), 9 pages. (17.09.2020).

★★ **Salmonella Stanley in mushrooms:** A Californian company has launched a **recall** for imported dried wood ear mushrooms following the discovery of **Salmonella** in the product by the California Department of Public Health. The product had been distributed to restaurants in several states, the District of Columbia and one Canadian province. At least 41 patients have been affected according to the Centers for Disease Control and Prevention (CDC). [Food-SafetyNews](#), 1 page. [CDC](#), 1 page. (24.09.2020).

★★ **Salmonella Newport in onions – end of the outbreak in Canada:** Canadian food safety authority Public Health Canada reports that the outbreak associated with American onions has ended. In total, there were **515 confirmed cases** of *Salmonella* Newport illness linked to this outbreak in **Canada**. In the **USA**, at least **1,012 cases** had been confirmed as of 31 August. [FoodSafetyNews](#), 1 page. [PublicHealthCanada](#), 1 page. (02.10.2020).

★★ **Botulism in Italy:** More than **30 people** have needed hospital treatment in Italy for *Clostridium botulinum* intoxication. A shared meal of tuna, mozzarella and tomatoes in a **company canteen** is the likely cause. [Food Safety News](#), 1 page. (05.10.2020).

Food safety

★★★ **SARS-CoV-2:** The International Commission for Microbiological Specifications of Foods (ICMSF) believes that it is highly unlikely that the ingestion of SARS-CoV-2 via food will result in illness. **ICMSF does not advise testing food** or production areas for the SARS-CoV-2 virus for reasons of quality assurance. [ICSMF Opinion](#), 8 pages. (03.09.2020).

★★★ **Mycotoxins in baby food:** Samples of infant food from the Austrian and Czech markets have been analysed for the presence of mycotoxins. **Trace levels** of 17 mycotoxins, including aflatoxin B1, zearalenone, deoxynivalenol and fumonisin B1 were detected. Two samples exceeded the regulatory limit of aflatoxin B1. Two toxins not reported previously, namely **aflatoxicol** and **sterigmatocystin**, were identified in 3% and 17% of foods respectively. [FoodControl](#), 16 pages. (05.10.2020).

★★★ **Climate change:** Climate change is **putting food safety at risk** and action is needed to prepare the food system for the challenges ahead, according to the UN's Food and Agriculture Organization (FAO). [FoodNavigator](#), 1 page. [FAO](#), 176 pages. (11.09.2020).

★★ **Campylobacter:** A study by the University of Bern has evaluated a new quantitative real-time PCR (qPCR) method for detecting *C. jejuni/coli* in **broiler herds in Switzerland** (caecal samples) and chicken meat on the Swiss market. 69.6% of broiler herds were identified as positive in total. From the **chicken meat** samples, 8.0% were positive by qPCR. [MedSys/MPDI](#), 11 pages. (10.09.2020).

★★ **Campylobacter:** The Food Standards Agency (FSA) has published the report of a four-year survey of **chicken** retail sale in the UK between August 2017 and July 2018. Samples were taken and tested for *Campylobacter*. The report revealed that the **contamination level of UK-produced chickens has reduced considerably** but remains high among minor retailers, independents and butchers. [FoodSafetyNews](#), 1 page. (14.09.2020). [Original publication](#), 2 pages.

★★ **Antibiotic-resistant Salmonella:** A study has used US surveillance data to estimate the probability of antibiotic-resistant *Salmonella* per meal made with **beef** from 2002 to 2010. The results indicate that switching all beef production to a raised-without-antibiotics system may **not have a significant effect** on antibiotic-resistant *Salmonella*. [AMR Insights](#), 1 page. [Medscape](#), 4 pages. (17.09.2020).

★★ **Per- and polyfluoroalkyl substances (PFAS):** The European Food Safety Authority (EFSA) has set a new **safety threshold** for the main per- and polyfluoroalkyl substances, or PFAS, that accumulate in the body. The German Federal Institute for Risk Assessment (BfR) will examine EFSA's opinion. [EFSA](#), 1 page. [BfR](#), 2 pages. (18.09.2020).

★★ **Pesticide residues:** The World Health Organization (WHO) performed a probabilistic assessment of the **acute dietary exposure to 38 pesticides**. Food consumption data from eight countries and more than 70,000 individuals was used, and more than 2 million analytical results from pesticide monitoring programmes were used. The results show the **absence of appreciable risk** for all countries and populations considered, even with the scenario based on 100% usage of pesticides in all foods. [FoodControl](#), 9 pages. (Online 20.08.2020, publication March 2021).

★ **Giardia:** Scottish health authority Health Protection Scotland has published provisional data on **Giardia infections in Scotland**. In 2019, 243 cases were reported, which represents an **increase** of 22% on 2018. MedSys. [Original publication](#), 13 pages. (15.09.2020).

★★ **Toxi-infections linked to red meat:** A study has assessed the toxi-infections associated with red meat consumption in France. The number of cases, deaths and Disability Adjusted Life Years (DALYs), or the number of years in good health lost, were estimated for eight foodborne pathogens. *Campylobacter* was ranked as the worst pathogen in terms of the number of cases associated with red meat consumption with 210 cases per 100,000 population. The pathogen that induced the highest mortality was non-typhoid *Salmonella enterica*, with 0.04 deaths per 100,000 population. However, the major contributor to the number of years in good health lost was **hepatitis E**, with 33 DALYs per 100,000 population. [Microbial Risk Analysis](#), 8 pages. (August 2020).

★ **Prions in camel milk:** In 2018, prion disease was detected in camels at an abattoir in Algeria for the first time. This led a UK university group to study the probability of entry of a **novel prion disease** agent into the United Kingdom via products derived from camels. The probability of entry of the pathogen was highest for camel milk products. [Microbial Risk Analysis](#), 8 pages. (August 2020).

Food fraud

★★★ **Food crime:** The English National Food Crime Unit and the Scottish Food Crime and Incidents Unit have assessed the **food crime threats to the United Kingdom**. The assessment examines the areas of the supply chain that may be vulnerable to food crime and identifies the **emerging threats** that must be addressed. [FoodStandard-Agency](#), 1 page. [Original publication](#), 62 pages. (01.10.2020).

★★ **Fake honey:** Honey is the **third-most-faked food** in the world, behind milk and olive oil. Real honey may be **diluted** with syrup derived from plants (corn or beet syrup) or the sugars in these syrups may be chemically **modified** to make them look like honey. [Insider](#), 4 pages. (09.2020).

★★ **Toxic chemicals in food:** Products like **formalin** or **ethephon** are used across Sub-Saharan Africa to **improve the look** of meat, fish, milk and fruit. Some products are used illegally, while others are used in an inappropriate way. [SciDevNet](#), 1 page. (03.07.2020).

★★ **Analytical methods:** The Food Fraud Task Force of the Association of Official Analytical Chemists (AOAC) has summarised the progress made on analytical methods for **honey**, **milk** and **extra-virgin olive oil** in a virtual event. Videos of the sessions will be made available following registration until early 2021. [FOCOS](#), 1 page. Videos: [AOAC](#). (15.09.2020).

★★ **Vanilla and black pepper:** Researchers in Denmark have developed a food fraud **detection method** for vanilla and black pepper, both of which can be adulterated for “high economic gain”. [FoodNavigator](#), 2 pages (21.09.2020).

★★ **Curcuma:** Adulteration **concerns** are rising along with curcumin’s popularity. The global curcumin market size is expected to grow by USD 32.11 million between 2020 and 2024. But because curcuma is often sold in powder form, making macroscopic visual inspection impossible, it is **more susceptible to adulteration** with extraneous, lower-cost botanical ingredients, like starch, chalk powder, cassava and synthetic dyes. [Natural Products Insider](#), 2 pages. (02.10.2020).

Close up

★★★ **New early detection tool using Twitter:** The ECDC has launched a free, open source interactive tool to help with the automated early detection of public health threats using Twitter data. The **epitweetr** tool allows users to **automatically monitor trends of tweets** by time, place and topic with the aim of detecting public health threats early through signals such as an unusual increase in the number of tweets. [ECDC](#), 1 page. (02.10.2020).

★★ **Reduction of pathogenic bacteria on tomatoes:** The results of a study by the University of Georgia (USA) indicate that using a combination of two **food additives approved by the FDA** (levulinic acid and sodium dodecyl sulphate) on tomato plants can significantly reduce the **STEC**, **Salmonella** and **Listeria monocytogenes** populations on harvested tomatoes. [Science Daily](#), 1 page. [FoodControl](#), 6 pages. (08.09.2020).

★★ **Warning regarding the “Miracle Mineral Supplement” (MMS):** Swissmedic advises against taking the so-called wonder cure “Miracle Mineral Supplement”, abbreviated to MMS, and other similar products such as chlorine dioxide, CDL, CDS or “Master Mineral Solution”. The claimed effects on serious conditions such as autism, malaria, cancer, AIDS or, more recently, infections with **coronavirus** are **neither plausible nor corroborated by any reputable studies**. [Swissmedic](#), 1 page. (22.09.2020).

Principal sources: SEISMO; HorizonScan; Safefood.ai.

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Seismo Info 09/2020



Source: mvcaspel, Fotolia

The FSVO compiles the most important food safety information every month: [FSVO Website](#)
Additional relevant subjects concerning early detection may be found in our online data base [ADURA](#).

★★★ very important info ★★ important info ★ interesting info

Food Trends

★★★ **GMO-Salmon:** There are plans to begin selling **genetically modified salmon** in the **US market** as of this autumn. The FDA and Health Canada approved the salmon as the first and only **bioengineered animal protein** for human consumption. The genetic modification is intended to better protect the fish during their early, most vulnerable stages of growth, resulting in an estimated 70 per cent increase in annual production output versus that of conventional Atlantic salmon. [Food Safety News](#), 1 page. [FDA](#), 3 pages. [Product website](#), 1 page. (08.09.2020).

★★ **Human breast milk as a sports food?** Athletes, in order to improve their performance, resort to the most varied products – apparently also **human breast milk**. The American FDA has explained the risks associated with the consumption of human breast milk and warns of a possible exposure to infectious diseases, such as HIV, as well as to chemical contaminants and traces of drugs. [Food Safety News](#), 3 pages. [Original publication](#), 2 pages. (20.08.2020).

Unusual outbreaks

★★★ **Salmonella Enteritidis:** The CDC has reported an outbreak with **Salmonella Enteritidis** in **USA and Canada**, reportedly from packaged **peaches**. Latest reports state a total of 126 people have been infected (78 in USA, 48 in Canada) involving 34 hospitalisations. No fatalities. [CDC](#), 2 pages. [Canada](#), 2 pages. (25.08.2020).

★★★ **Salmonella Typhimurium:** A Salmonella outbreak in the **United Kingdom** involving **98 cases** has been reported. The most probable cause is due to nuts ([Brazil nuts](#)), which had been incorporated in Muesli bars. Affected products had apparently been shipped to more than 30 countries. [Food Safety News](#), 2 pages. [Food Safety News](#), 1 page. (28.08.2020).

★★ **Clenbuterol in meat:** Officials in a Mexican state have issued a warning after suspicions that more than **50 people** fell sick from eating **meat contaminated with clenbuterol**. Clenbuterol is a medicinal product that has been used as a food additive in some livestock feed to promote muscle mass and **meat yield** in cattle, lamb, poultry and swine. Such use is illegal in the U.S. and in Europe. [Food Safety News](#), 2 pages. (26.08.2020).

★★ Officials in Ireland are investigating an outbreak caused by **Cryptosporidium in prepacked salads**. The product was recalled. More than 40 people were infected. [Food Safety News](#), 2 pages. (13.08.2020).

★★ **Update on Salmonella Newport:** Last month we reported an outbreak of **Salmonella Newport** in **USA** caused by contaminated **onions**. The number of infections has continued to increase; status as of 10.09.2020: a total of 1,469 people have been infected –1,012 in USA and 457 in Canada. One person has died, although it is not known whether *Salmonella* contributed to the cause of death. [CDC](#), 2 pages. [Canada](#), 3 pages. (10.09.2020).

★★ **Denmark:** Public health officials in Denmark are looking into three outbreaks that have sickened almost 50 people; one outbreak being caused by **Hepatitis A** and two due to rare strains of *Salmonella*. The Hepatitis A outbreak involved 14 people and 11 of them were admitted to hospital. The outbreak of **Salmonella Strathcona** included 23 people and the other of **Salmonella Kasenyi** involved 11 patients. The suspected causes are **imported foods**. [Food Safety News](#), 2 pages. (27.08.2020).

★ **Cyclospora outbreak:** The *Cyclospora* outbreak, already reported in Seismo Info 07/2020 and linked to bagged **salads** (iceberg lettuce, red cabbage and/or carrots), continues to spread in USA. A total of 690 people have been affected in 13 federal states. [Food Safety News](#), 1 page. [CDC](#), 2 pages. (17.08.2020).

★ **Salmonella Anatum:** An outbreak of the relatively rare *Salmonella enterica* serovar **Anatum** exists since 2015 in **Taiwan**. **Pork meat** and **poultry** have been identified as vehicles for the transmission. Nearly identical *Salmonella* Anatum strains have been identified in the United Kingdom, the United States, and the Philippines. [Original publication](#), 2 pages. (19.08.2020).

Food safety

★★★ **SARS-CoV-2 on imported foods:** Chinese authorities have indicated that traces of **SARS-CoV-2** had been detected on the surface of **frozen chicken wings**, imported from Brazil. The discovery came a day after traces of the virus had been found on the packaging of frozen **shrimp** from Ecuador. It is unclear whether and to what extent the new coronavirus will have an influence on the international trade with foodstuffs. [Swissinfo](#), 1 page. [Food Safety News](#), 1 page. (18.08.2020).

★★★ **Vibrio, E. coli ST 131, STEC:** Three studies commissioned by the FSVO were recently completed. The aim of the literature review on [Vibrio spp.](#) was to assess the prevalence of *V. parahaemolyticus* and *V. vulnificus* in

seafood and fish; their levels in **seafood** were found to be 43.1 % and 17 % respectively. [Vibrio](#), 44 pages. For [E. coli ST 131](#) the authors estimate the risk for Swiss foodstuff producers as moderate for **poultry and fish products** and as low for all other products. [E. coli ST 131](#), 36 pages. The persistence and prevalence of [STEC](#) in flour products was assessed by means of Challenge tests and qPCR. [STEC](#), 43 pages. (03.09.2020).

★★★ **Microplastics in fruit and vegetables:** Notification from the BeoWarn information sheet no. 4/2020 (internal document). "Two current studies examine the presence of **microplastics in plants**. According to the authors, **apples** are the most highly contaminated fruit and **carrots** are the most highly contaminated vegetable. The particles are thought to reach the plants due to the uptake of water by the root systems." [Publication A](#), 7 pages. [Publication B](#), 7 pages.

★★ **Microplastics in seafood:** A new study reveals just how much and what types of **microplastics** may be contained in various **fish and seafoods** (oysters, prawns, sardines, ...). The analytical method could help reveal the extent of contamination in seafood and aid risk assessments to consumers, the researchers say. [C&EN](#), 1 page. [Original publication](#), 10 pages. (24.08.2020).

★★ **Mycotoxins in tomato products:** A collaborative study by several cantonal laboratories (ZH, SG, TG, GR, GL and Lichtenstein) has revealed the presence of **tenuazonic acid (TEA)** in 38 of 54 (ca. 70%) investigated tomato products - from pelati to ketchup to tomato purée. Tenuazonic acid is a mycotoxin (mould fungus toxin) of the group of the *Alternaria* toxins. Four samples were rejected. [SRF](#), 1 page. [Office Grisons](#), 1 page. More information on this topic may be found in our database [ADURA](#). (27.08.2020).

★★ **HEV in pork:** A German study was able to detect the **RNA of Hepatitis-E-Viruses (HEV)** in commercially available pork; more than 10% of all the tested products were found to be contaminated. [Animal Health Online](#), 1 page. [Original publication](#), 19 pages. (10.09.2020).

★★ **HEV in goat products:** A recently published Egyptian study describes the prevalence of **hepatitis E viruses** in goats by means of analyses of sampled milk, blood, urine and faeces. In **goat milk**, immunoglobulin G (IgG), antigens (Ag) and RNA of hepatitis E viruses were detected in 7%, ca. 2% and 0.7% of the samples, respectively. [Original publication](#), 8 pages. (21.08.2020).

★★ **Cadmium in seaweed:** The French Agency ANSES has raised concerns on the potential risks of **seaweed** as a foodstuff. In nearly a quarter of edible algae analysed by ANSES, **cadmium concentrations** were found to be greater than the maximum content of 0.5 mg/kg set by the French authorities. Cadmium is classified as a human carcinogen and is naturally occurring in the environment. [Food Navigator](#), 2 pages. [ANSES](#), 1 page. [Original publication](#), 57 pages.

★★ **Citrus fruit and Listeria:** A U.S. producer has recalled oranges, lemons and limes, among other things, as they may be contaminated with *L. monocytogenes*. [Food Poison Journal](#), 2 pages. (10.08.2020).

★ **Morphine in poppy baked goods:** Several producers have recalled **poppy-containing baked goods**, as an elevated **morphine content** was detected in them. The problem already occurred in poppy from Slovakia at the same time last year (see Seismo Info 09/2019). [Produkt warning](#), 1 page. (19.08.2020).

★ **Oleandrin in milk:** Notification from the BeoWarn information sheet no. 4/2020 (internal document). "In this study of a poisoning of 50 milk cows that were affected after being offered a diet containing dry oleander pruning wastes accidentally mixed with fodder, the toxin [oleandrin](#) was detected in serum, liver and heart as well as in **milk** and **cheese** samples. This is the first report of the transfer of oleandrin into **milk and dairy products** and suggests a potential risk for consumers." [Original publication](#), 11 pages. (08.09.2020).

Food fraud

★★ **COVID-19:** The COVID-19 pandemic has left traces in the food supply network. A new report gives an overview of the various challenges that need to be met in regard to **food fraud**. [Sterling Crew](#), 3 pages. (08.09.2020).

★★ **Dolphin meat in canned tuna:** A study by a Mexican student has discovered evidence of dolphin meat in **canned tuna**. In 15 of the investigated cans, three were found to contain traces of **dolphin DNA**, thereby confirming the presence of dolphin meat. [Seafood Source](#), 1 page. (02.09.2020).

Close up

★★★ **The next pandemic:** An 82 page document entitled “**Preventing the Next Pandemic – Zoonotic diseases and how to break the chain of transmission**” has been published by UNEP (*United Nations Environment Programme*) and ILRI (*International Livestock Research Institute*). The authors provide recommendations on how future zoonotic outbreaks may be prevented, and identify **One Health** as the optimal path for preventing and responding to future pandemics. [Press Release](#), 2 pages. Key messages ([English](#) and [French](#)), 1 page. [Original publication](#), 82 pages. (03.09.2020).

★★★ **Microplastics as bacteria transporters:** Microplastics in the world's oceans is a known problem for the environment. A new study now warns that the problem may be much greater than previously thought, since the **transport of pathogens**, such as bacteria and viruses, may be promoted by microplastics. [Science Daily](#), 1 page. [Original publication](#), 10 pages. (28.08.2020).

★★★ **EHEC in Switzerland:** Laboratory-confirmed cases of infections with Shiga toxin-producing *E. coli* (STEC) have **markedly increased in Switzerland since 2015**. The question to be posed is whether there are in fact more cases or whether this increase is attributable to the increased number of laboratory tests. In a new publication, Swiss researchers concluded that this increase is not attributable solely to an increased number of tests, and it probably concerns a real epidemiological trend. [Original publication](#), 11 pages. (27.08.2020).

Principal sources: SEISMO; HorizonScan; Safefood.ai.

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Seismo Info 08/2020



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very important info



important info



interesting info

Food Trends



Protective coating for avocados: A Swiss retailer launches avocados coated with a **protective layer** intended to keep them fresh for longer. [Food Aktuell](#), 1 page. (05.08.2020).



Nanotechnology: The EFSA invites feedback on a draft document aimed to establish criteria to assess the presence of **nanoparticles in food and feed products**. Comments may be submitted up to 9th September 2020. [EFSA](#), 1 page. (09.07.2020).



Sea cucumbers: Researchers in Norway are investigating commercial farming practices for [sea cucumbers](#), which they say should be exploited as a raw ingredient for **health products**. Sea cucumbers have long been consumed in Asian countries. [Food Navigator](#), 2 pages. (08.07.2020).

Unusual outbreaks

★★★ **Salmonella Newport:** The CDC reports an outbreak of 125 cases of **Salmonella Newport** in USA involving 24 hospitalisations. The cause could not be established and is actively searched. The outbreak has spread rapidly – also in Canada. [CDC](#), 1 page. (22.07.2020). **Update 03.08.2020: Onions** have now been identified as the most probable cause. **Present numbers:** in USA 640 reported cases, 85 hospitalisations, no deaths. An additional 239 reported cases in Canada. [Canada](#), 4 pages.

★★★ **E. coli:** Two unrelated outbreaks of *E. coli* have been reported in **South Korea** and **Japan**; a total of **several thousand people** have been affected. The outbreak in South Korea was traced back to a kindergarten; the majority of the more than 100 cases were children. There were 21 hospitalisations; 16 of these people showed indications of **haemolytic uremic syndrome (HUS)**. In Japan, more than 3 400 teachers and pupils in 15 schools were struck down with food poisoning. *E. coli* was detected in the faeces of some patients and was later found in the **sea-weed salad** that had been delivered to the schools. [Food Safety News](#), 1 page. [Asahi Shimbun](#), 1 page. [Korea Herald](#), 1 page. (20.07.2020).

★★★ The report on the **food-related group outbreaks in Switzerland** in 2019 has been published. Food-related outbreaks of illness occur very infrequently in Switzerland. A total of **23 food-related outbreaks of illness** were reported in 2019. Although this is twice as many as in the previous year, the number remains low in comparison to other countries. [FSVO Report](#), 4 pages. (06.06.2020).

★★ The **Norwegian authorities** have published a report on **food-related group outbreaks**. A total of **46 outbreaks** were reported for a population of 5.3 million. The greatest outbreak, afflicting more than 2 000 persons, was traced back to *C. jejuni* in the potable water supply. [Food Safety News](#), 1 page. (29.07.2020).

★ **Red kidney beans:** The outbreak at the beginning of the year in **Denmark** was traced back to **red kidney beans**. The outbreak was caused by too much **phytohaemagglutinin (PHA)** in the frozen beans; it appeared the kidney beans weren't boiled for long enough by the catering company concerned. PHA is one of the lectins that occur naturally in various pulses, and in high amounts may also have a toxic effect. [Food Safety News](#), 2 pages. (08.07.2020).

★ **Zucchini** as a possible cause of a plurality of cases of illness in UK. Zucchini contain a naturally occurring compound ([cucurbitacin](#)). When the cucurbitacin content is at a high enough level, it can lead to symptoms such as **nausea** and **diarrhoea**. Four families in Castle Acre, Norfolk reported feeling unwell after eating produce they had grown. [Food Safety News](#), 1 page. (26.07.2020).

Food safety

★★★ **Zoonosis report Switzerland 2019: Campylobacteriosis** and **Salmonellosis** remain the most frequently reported zoonoses in humans in 2019. Increased numbers of cases, for example Q-fever and tularaemia, have occurred with some other zoonoses. [Press release](#), 2 pages. [Original report](#), 43 pages. (22.07.2020).

★★★ **COVID-19:** Investigations of a super spreader incident in Germany in a **slaughterhouse** demonstrated a spread of the SARS-CoV-2 in a radius of 8 metres between the index case and work colleagues. The slaughterhouse is equipped with an air circulation system set to 10 °C. In addition, the virus seems to have persisted in the slaughterhouse. [Original publication](#) (not peer-reviewed), 30 pages. (23.07.2020).

★★★ The Food and Agriculture Organisation of the United Nations (FAO) and the World Health Organisation (WHO) have observed an increase in outbreaks and cases of food-related illnesses traced back to **Vibrio parahaemolyticus** and **Vibrio vulnificus**. They have compiled risk assessment principles to assess seafood by means of the risk management. [Meeting Report](#), 86 pages. (28.07.2020).

★★★ **E. coli ST131:** *Escherichia coli* sequence type (ST) 131 is of concern because it can acquire antimicrobial resistance and cause extraintestinal infections. The *E. coli* sublineage ST131-H22 appears capable of being transmitted to humans through **poultry**. Researchers have now reported multidrug-resistant ST131-H22 poultry isolates in Brazil which are closely related to international human and poultry isolates. [Original publication](#), 1 page. (30.07.2020).

★★ **Selenite:** The European Food Safety Authority (EFSA) rejects the use of **selenite triglyceride** as a novel food. The reasoning: it is not clear in which form the substance, which is intended as a food supplement to be a source of selenium (Se), is present in the body following ingestion and absorption; consequently, it must be treated as a **xenobiotic** with unknown effects. [Food Navigator](#), 2 pages. [EFSA](#), 19 pages. (08.07.2020).

★★ **Aluminium in foods:** The BfR has published questions and answers on **aluminium in foods** and products intended for consumption. "Food classes with the highest individual contributions (of aluminium) are instant tea drinks (11 % of the total uptake from foods), mixed raw vegetable salads (8 %), tea drinks (7 %) as well as cocoa and chocolate products (6 %) and multigrain bread or rolls (4 %)." [BfR](#), 8 pages. (21.07.2020).

★★ Detection of **Toxoplasma gondii** in retail meat samples in **Scotland:** *Toxoplasma gondii* DNA was detected in 0/39 (0 %) beef samples, 1/21 (4.8 %) chicken samples, 6/87 (6.9 %) lamb samples, 3/71 (4.2 %) pork samples and 48/149 (32.2 %) venison samples. [Original publication](#), 6 pages. (27.07.2020).

★★ Evaluating the **residual nitrite concentrations in bacon** in the United Kingdom: A total of 89 different commercially available bacon samples were collected, and analysed using flow injection analysis to determine their residual nitrite content. The mean residual nitrite concentration for all bacon samples was **10.80 mg/kg**. [Original publication](#), 7 pages. (11.07.2020).

★★ Detection and quantification of **hepatitis E virus RNA** in ready to eat raw **pork sausages** in the **Netherlands**. HEV RNA was detected in 46/316 raw pork sausages (14.6 %). *Cervelaat*, *salami*, *metworst* and *snijworst* are more often positive than other sausages. The average level in contaminated sausages was 2.76 log₁₀ HEV gc per 5 g. [Original publication](#), 25 pages. (12.07.2020).

★★ The German Federal Institute for Risk Assessment (BfR) has published an opinion on **Shiga toxin-producing E. coli (STEC)** in flour. [Food Safety News](#), 2 pages and [Original publication](#), 28 pages. (28.07.2020).

★ **Vitamin D3:** There is a suspected case of **food poisoning** (hypercalcemia) that was caused by a too high content of vitamin D3 (2612.7 mg/day) in **food supplements** from Spain. [RASFE](#), 1 page. (22.07.2020).

★ The Food Standards Australia and New Zealand FSANZ has identified **Salmonella in raw fish** as an emerging risk for food safety. For example, it was determined that three serotypes of *Salmonella* from one farmed species have been found to cross-contaminate equipment and two other fish species. Although as yet no human health issues have been determined which are directly related to this issue, this topic is viewed as a **potential emerging issue** – particularly with the increase in consumption of raw fish such as sushi, sashimi, ceviche, poke. [FSANZ](#), 7 pages. (29.07.2020).

Food fraud

★★★ **Operation OPSON IX:** Eleven European states have joined together in the Operation OPSON IX, coordinated by Europol and INTERPOL, in order to collectively prosecute possible cases of fraud in various foodstuffs. Among the results are: in Germany about **one quarter** of the investigated **olive oils** were found to be adulterated; the authorities determined anomalies in **17%** of the investigated **vanillin-containing products**, and more than 17 tons of **horse meat** were impounded from several slaughterhouses in **Ireland** and other European countries. [BVL](#), 2 pages. [AgriLand](#), 2 pages. (29.07.2020).

★★★ **COVID-19:** As the supply chains continue to be affected by the current pandemic, there are growing concerns across the global **food and beverage industry** that vigilance against the varied types of food fraud is critically low. New supply chains are being created and consequently offer possibilities for criminal operators to become active in this field. [Lloyd's Register](#), 1 page. (17.07.2020).

★★ **Methodology to identify rice:** A new study presents a methodology that is capable of differentiating the **origin of rice** from China, Vietnam and India. It is intended to protect consumers against misleading information and fraud. [Original publication](#), 9 pages. (20.07.2020).

★★ **Elderberries:** As a result of the Corona pandemic, substances that are reputed to strengthen the immune system are proving increasingly popular; these include **elderberries**. However, this trend also leads to products that are increasingly adulterated. [Nutra Ingredients](#), 2 pages. (08.07.2020).

Close up

★★★ **Plantations and animal husbandry:** The connection between **animal husbandry** and the contamination of nearby **orchards** is the subject of a new study. Result: one out of five air samples (20%) in an almond plantation that neighbored a poultry farm tested positive for *E. coli*. In 2019 in the USA, there was an *E. coli* outbreak that was traced back to leaf spinach (167 cases); in May this year the FDA published the results of its investigations and wrote that a possible contributory factor was the close proximity of the cultivation area to cattle. [Food Safety News](#), 2 pages. [Abstract](#), 1 page. [FDA](#), 6 pages. (21.07.2020).

★★★ Researchers from the University of Houston have reported that titanium dioxide doped with cobalt (CoO-TiO₂) in the form of nanoparticles inhibits the proliferation of *Listeria monocytogenes*. These results show that CoO-TiO₂ could be added as an antimicrobial in the food processing industry (e.g. in production units, direct application into foodstuffs and to food-contact surfaces). [Science News](#), 2 pages. [Original publication](#), 30 pages. (10.07.2020).

★★ **Salmonella:** Researchers have discovered that some strains of *Salmonella* circumvent the immune defence system of plants and enter **salad leaves**, in that they open the miniscule breathing pores of the plants (**stoma**). Once inside the plants the bacteria can **no longer be washed out** and consequently transmit the food-related illness. [Science Daily](#), 3 pages. [Original publication](#), 16 pages. (20.07.2020).

★★ Control of *Vibrio parahaemolyticus* in mussels by the gram-negative bacterium [Halobacteriovorax](#), isolated from the Adriatic, which feeds on other bacteria. The bacterium was able to reduce the *V. parahaemolyticus* count during the cleaning of the mussels. [Original publication](#), 25 pages. (21.07.2020).

Principal sources: SEISMO; HorizonScan; Safefood.ai.

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