



Seismo Info 12/2021



Source: mvcaspel, Fotolia

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

[FSVO website](#)

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

Food trends

★★★★ **Food supplements:** In the United States, sales of herbal food supplements **increased by a record-breaking** 17.3% in 2020. **Sales** of immune health, stress relief, and heart health supplements grew during the COVID-19 pandemic. [Herbalgram](#), 6 pages. (2021). The **spike in demand** for food supplements caused by the COVID-19 pandemic has been a boon for the supplements industry, but has also given rise to an **increased risk of adulteration**. [NutraIngredients](#), 1 page. (08.11.2021).

★★★★ **Alternative proteins:** The proportion of people in the UK who confirm that they eat and drink plant-based **meat and dairy substitutes** such as plant-based milk, vegan sausages and vegetable burgers nearly **doubled** between 2008–2011 and 2017–2019. [EurekAlert!](#), 3 pages. (11.11.2021). Original publication: [SciTotalEnviron](#). A recently published article claims that the **salt content** of plant-based **meat alternatives** is “unnecessarily” high. [NewFoodMagazine](#), 2 pages. (25.11.2021). Original publication: [ActionOnSalt](#). An article explores the potential for mass food recalls and allergic reactions linked to alternative proteins, including plant-based and insect-based, as the demand for such products continues to increase. [NewFoodMagazine](#), 2 pages. (03.12.2021).

★★ **Genetically modified organisms:** The Brazilian government has **approved the sale** of a drought-tolerant **transgenic wheat**, HB4, as flour. The modification was introduced from a sunflower gene. [GeneticLiteracyProject](#), 1 page. (15.11.2021). Original publication: [LaNacion](#).

★★ **Sugar:** A company is leveraging fermentation technology to enhance the **perception of sweetness** in **yogurt products**. The technology converts lactose into glucose, thereby making its products appear sweeter without having to add sugar. [FoodNavigator](#), 2 pages. (16.11.2021).

★★ **Insects:** The European Commission has **approved** the sale of a second species of insect, **Locusta migratoria** (migratory locust), as a **novel food**. [WashingtonPost](#), 2 pages. (12.11.2021).

★★ **Upcycling:** Researchers have come up with a naturally derived **wild strawberry aroma** by having an edible fungus make it from **waste products** of blackcurrant juice production. [ScienceDaily](#), 1 page. (17.11.2021). Original publication: [JAgrFoodChem](#). An article reviews the **challenges** that the use of **packaging** made from recycled materials poses in terms of **food safety**. [FoodSafetyMagazine](#), 8 pages. (18.10.2021).

★ **Smart packaging:** An article envisages a world in which smart packaging **provides real-time updates** on carbon footprints, gives live warnings of product recalls and **issues instant safety alerts** if allergens are detected unexpectedly in the factory. [ScienceDaily](#), 3 pages. (12.11.2021). Original publication: [Patterns](#).

Unusual outbreaks

★★★ **Salmonella Coeln:** An outbreak of a **rare type of Salmonella**, *Salmonella Coeln*, has been declared after more than 50 people fell ill. The outbreak is thought to have been caused by **fresh sprouts**. [FoodSafetyNews](#), 2 pages. (19.11.2021). More information: [FoodWorld](#); [Folkhälsomyndigheten](#) (in Swedish).

★★★ **Atomizer:** In Germany, an atomizer has been recalled over fears of a possible contamination with **Burkholderia cenocepacia** and **Ralstonia spp.** These bacteria can cause infections in consumers with a weakened immune system. [BVL](#), 1 page. (02.12.2021).

★★★ **Papayas:** In 2017 and 2019, **five outbreaks** of infections from multiple strains of **Salmonella** linked to the consumption of **whole, fresh papayas** were reported in the United States, resulting in 325 cases of illness. [JFood-Prot](#), 18 pages. (11.2021).

★★ **E. coli O157:H7:** An **outbreak** of *E.coli* O157:H7 which left ten people ill and two in hospital has been linked to **baby spinach**. [CDC](#), 2 pages. (10.11.2021).

Food safety

★★★ **Cannabidiol:** The Federal Food Safety and Veterinary Office (FSVO) has published a **new briefing letter** on the topic of **Cannabidiol (CBD)** in foodstuffs and its **effects on the liver**. [FSVO](#), 2 pages. (03.12.2021).

★★★ **Coumarin:** The French National Agency for Food, Environmental and Occupational Health & Safety (Anses) has published its **guidelines regarding coumarin in food supplements**, recommending a **maximum daily intake** of 6mg of coumarin for a 60kg adult. [VigilAnses](#), 2 pages. (11.2021).

★★★ **Campylobacter:** A **survey** conducted in the United Kingdom between August 2019 and October 2020 examined **levels of Campylobacter on whole fresh retail chickens** from independent shops, butchers and smaller supermarket chains. *Campylobacter* was detected in **59.6% of the chicken skin samples**, and 12.8% percent of them contained more than 1,000 colony forming units per gram (CFU/g) of chicken skin. [FoodSafetyNews](#), 3 pages. (30.11.2021). Original publication: [FSA](#).

★★★ **Brucella:** In France, **cheese made from raw milk** has been recalled over fears of a possible contamination with **Brucella spp.** [RappelConso](#), 1 page. (23.11.2021).

★★★ **Flour:** A recently published study examined the **survivability** and **thermal resistance** of **Salmonella** and **Escherichia coli O121** in wheat flour during extended storage. A **decrease of more than 5 log CFU/g** was observed in the population of both pathogens after a storage period of 360 days; thermal resistance did not increase during that time. [IntJMicr](#), 25 pages. (30.11.2021). A study conducted in Germany detected **Shiga toxin-producing E.coli (STEC)** in 9.1% of samples of **wheat flour** collected in flour mills. The German Federal Office of Consumer Protection and Food Safety (BVL) is advising consumers to **thoroughly cook** pasta and bakery products before eating them. [BVL](#), 1 page. (02.12.2021).

★★ **Heavy metals:** In New Zealand, a producer of **liquorice sweets** has **recalled its own products** due to a potential **lead** contamination. [RNZ](#), 1 page. (12.11.2021). During 2018–2019, two US states investigated **heavy metal poisonings** associated with commercially and home-prepared **cakes**. The cakes had been finished using **decorative ingredients** later found to contain high levels of copper, lead and other metals. [CDC](#), 4 pages. (29.10.2021). An article describes a case of **childhood saturnism** (lead poisoning) associated with **turmeric**. [CDC](#), 2 pages. (12.11.2021). The US Consumers' Association Consumer Reports (CR) analysed **arsenic, cadmium** and **lead** levels in 126 **herbs and spices** from 38 brands. Almost a third had heavy metal levels that were **dangerous** to human health. [AffidiaJournal](#), 1 page. (22.11.2021), original publication: [ConsumerReports](#). A consumer protection group claims it has new testing data that confirms the presence of **cadmium** in a range of **spinach-based products**. [Food-SafetyNews](#), 2 pages. (02.12.2021). Original publication: [AsYouSow](#).

★★ **Radioactivity:** A campaign led by cantonal chemists in Switzerland has analysed samples of **foodstuffs imported from Japan**. **No anomalies** have been detected in the results at the time of writing. [KLBS](#), 2 pages. (12.11.2021).

★★ **Mushrooms:** The cantonal laboratory of the Swiss Canton of Basel Stadt (Basel-City) carried out over 240 **inspections on mushrooms** in 2021. **Inedible and toxic mushrooms** accounted for 4% of the harvested specimens and were separated accordingly. Two basketfuls of mushrooms even contained **fatally toxic fungi**, namely death caps and fly agarics. [KLBS](#), 2 pages. (01.12.2021).

★★ **Seaweeds:** A recent article provides a summary of the available literature on the **microbiological food safety** and **quality of seaweed-based products**. It also discusses the over- or misuse of **antimicrobials** and simultaneous spread of microbial **resistance**. [Foods](#), 22 pages. (06.11.2021). A French start-up is championing **seaweed** as a **substitute for animal proteins**. [FranceCulture](#), 2 pages. (21.11.2021).

★★ **Fish:** The Aquaculture Advisory Council (AAC) has urged European and national agencies to recognise that **different fish production methods** can cause **different food safety risks**. [FoodSafetyNews](#), 2 pages. (22.11.2021). Original publication: [CCA](#). A study has discovered **plasticiser compounds** in several **Mediterranean Sea fish**. [AffidiaJournal](#), 1 page. (17.11.2021). Original publication: [EnvironPollut](#).

★★ **Parasites:** A review examines **foodborne parasites**, which the authors describe as an “**insidious threat**” to food safety and public health. [FoodSafetyMagazine](#), 7 pages. (18.10.2021).

★ **Nitrates:** An article explains why nitrates and nitrites in **processed meats** are harmful, but those in **vegetables** are not. [TheConversation](#), 3 pages. (10.11.2021). A randomised clinical trial shows that a **higher intake of nitrate-rich vegetables** lowers **blood pressure** in individuals with high blood pressure (hypertension). [JMontréal](#), 3 pages. (29.11.2021). Original publication: [JNutr](#).

Food fraud

★★★ **Price increases:** The United Nations Food and Agriculture Organisation (FAO)'s **Food Price Index** has **surged** to a new peak, reaching its **highest level in a decade**. The rising prices may **increase the likelihood of the occurrence of food fraud**. [UNNews](#), 2 pages. (04.11.2021).

★★ **Fishing: Illegal**, unreported and unregulated fishing is **on the rise**, according to a new report. It is estimated that over 34% of the world's fisheries are **overfished**, while 60% are fished to their maximum capacity. [FoodNavigator](#), 2 pages. (03.12.2021). Original publication: [PlanetTracker](#).

★★ **Spices:** In India, a wholesale dealer of spices was arrested for allegedly selling **adulterated cumin seeds**. The cumin seeds were **mixed with sulfa seeds**, which resemble cumin seeds and are used as cow feed. [TelegraphIndia](#), 2 pages. (04.11.2021). The European Commission has published the results of the first ever **EU-wide survey** into the authenticity of herbs and spices. [FoodNavigator](#), 3 pages. (26.11.2021). Original publication: [EC](#).

★★ **Dyes:** Food safety authorities in India have discovered that **dyes intended for fabrics** are being used in the production of foodstuffs such as **sweets**. [TribuneIndia](#), 1 page. (03.11.2021).

★★ **Jaggery:** Jaggery is a **sweetener** made from dried, unrefined sugar cane juice or palm tree sap. There is a **growing demand** for jaggery in India, and authorities are warning of the **risk of food fraud**. [TheRottenApple](#), 1 page. (06.11.2021). Original publication: [TheNewIndianExpress](#).

★ **Organic products:** A Taiwanese vegetable farmer has been arrested for **forging the "organic" label** on his produce. The farmer **removed organic certification labels** from organic supermarket produce before attaching those labels to packets of vegetables from unknown sources. [TaiwanNews](#), 1 page. (29.11.2021).

Close up

★★★ **Ultra-processed foods:** Ultra-processed foods account for around **two thirds of the calories** consumed by American adolescents. There is an **inverse association** between the percentage of calories absorbed from such foods and **heart health**. [JAdolethHealth](#), 9 pages. (29.10.2021).

★★★ **Microbiome:** New clinical research indicates that a widely used **food additive, carboxymethylcellulose**, alters the intestinal environment of healthy persons, **perturbing levels of beneficial bacteria** and nutrients. The authors underline the need for further study of the long-term impacts of this food additive on health. [ScienceDaily](#), 2 pages. (30.11.2021). Original publication: [Gastroenterology](#). Researchers have determined how two **microbiota-targeted dietary interventions**, plant-based fibre and fermented foods, **influence the microbiome** and **immune system** in healthy adults. [Cell](#), 32 pages. (05.08.2021).

★★★ **Antibiotic resistance:** A recent study posits that the ultraviolet aging of **microplastics** in the environment makes them **apt platforms** for antibiotic-resistant genes (ARGs), meaning that microplastic pollution aids **antibiotic resistance**. [EurekAlert!](#), 2 pages. (02.12.2021). Original publication: [JHazardMater](#).

★★ **Nutrition:** Research suggests that the makeup of our **diet** could be **more powerful than drugs** in **keeping conditions** like diabetes, strokes and heart disease **at bay**. [ScienceDaily](#), 3 pages. (16.11.2021). Original publication: [CellMetabolism](#).

★★ **Palm oil:** New research has identified a link between the **spread of mouth and skin cancer** in mice and the **consumption of palmitic acid**. [FoodNavigator](#), 3 pages. (01.12.2021). Original publication: [Nature](#).

★★ **Pesticides:** Replacing a **modern, 'western' diet** of highly processed foods with a **Mediterranean diet** filled with conventional, chemically-grown fruits and vegetables may **triple exposure to toxic pesticides**. [BeyondPesticides](#), 2 pages. (09.11.2021). Original publication: [AmJCLI Nutr](#). A **total of 1,930 tonnes of pesticide were sold** in Switzerland in 2020, 23 tonnes less than in 2019. Sales of glyphosate have **fallen** for the seventh consecutive year. Five of the ten most-sold substances in 2020 can be used in **organic farming**. [FOAG](#), 2 pages. (21.11.2021).

★★ **Climate change:** A recent review looks at the **causes and impacts** of climate change on **food safety** and considers **mitigation and adaptation strategies** to address the problem. [JFoodProt](#), 14 pages. (11.2021). Swedish authorities have **analysed the impact** of climate change on food safety, with a focus on conditions in Sweden. [Food-SafetyNews](#), 3 pages. (02.12.2021).

*Thank you for your fidelity, Happy Holidays
and see you in 2022!*

Want to receive each new issue of Seismo Info as soon as it's published? Click [here](#) to subscribe to the Food Safety and Nutrition newsletter.

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

Disclaimer: The presentation of articles reflects their media presence. The FSVO assumes no responsibility for the validity of the information obtained from the scanned media channels. The expressed views are not to be taken as an official opinion of the FSVO.



Seismo Info 11/2021



Source: mvcaspe, Fotolia

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

[FSVO website](#)

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

Food trends

★★★★ **Alternative proteins:** Vegetable-based alternatives to **eggs** and **prawns** are expected to be the next alternative sources of protein on the market. As part of the test phase, the products will be available in a limited number of shops across Switzerland and Germany. [FoodAktuell](#), 1 page. (07.10.2021). A **vegan egg substitute** is already available to shoppers in Switzerland. [AargauerZeitung](#), 1 page. (29.10.2021).

★★★★ **Lab-grown coffee:** Lab-grown coffee could become a reality, as the **demand for coffee surges** and exceeds the global supply. [FoodNavigator](#), 3 pages. (20.09.2021).

★★★★ **Sweets infused with cannabis:** In the United States, two attorneys are sounding the alarm over the **sale of cannabis-infused sweets**. [NutraIngredients](#), 3 pages. (25.10.2021). Authorities in the Republic of Ireland have seized thousands of **chocolate bars** laced with cannabis. [Independent](#), 2 pages. (28.10.2021).

★★★ **Antimicrobial treatment:** A recently published article suggests that “**cold plasma**” technology could be the future of food safety. [FoodSafetyNews](#), 2 pages. (13.10.2021). More information: [LWT](#), [FoodMicrobiol.](#)

★★ **Edible packaging:** A British company has developed an edible wrapper for **stock cubes**. [FoodNavigator](#), 2 pages. (27.10.2021). **Edible coffee cups** are becoming increasingly popular. [WEFForum](#), [Delicious.com](#), [CookingChannel](#). (2021).

★★ **Upcycling:** Milk enriched with **pomegranate extracts** has been used to produce different **cheeses**. The cheeses showed an increase in firmness and a slight decrease in *S. aureus* counts, of more than one log unit in comparison to the control cheese, for up to 12 days of cold storage. [Foods](#), 15 pages. (03.11.2021).

★ **COVID-19:** A recent publication focuses on the **impact** of COVID-19 on **eating habits**. [SmartBrief](#), 2 pages. (29.09.2021).

★ **Baobab:** Actors in the baobab industry have welcomed the publication of new studies that support claims that the African “superfruit” is an **exceptional source of prebiotic dietary fibre**. [FoodNavigator](#), 2 pages. (04.11.2021). Original publication: [Microorganisms](#).

★ **Veganism:** The **number of vegans** in Switzerland and Liechtenstein has **doubled in a single year**. Vegans represented 0.3% of the population in 2020, a figure which has already increased to over 0.6% in 2021. [FoodAktuell](#), 1 page. (01.11.2021). More information: [Swissveg](#).

Unusual outbreaks

★★★ **Sesame:** The European Centre for Disease Prevention and Control (ECDC) has published a report on an outbreak of multiple serotypes of *Salmonella enterica*, linked to imported sesame-based products, in several countries. [ECDC](#), 59 pages. (14.10.2021).

★★★ **Onions:** More than **800 people** have been affected by an **outbreak of salmonella** linked to onions in the United States. [CDC](#), 1 page. (29.10.2021).

★★ **Trichinella:** A number of Argentinian provinces have recently reported **human outbreaks of trichinellosis**. Eight cases have been confirmed, with another five probable cases reported. [FoodSafetyNews](#), 3 pages. (05.10.2021).

Food safety

★★★ **SARS-CoV-2:** A study has been carried out to determine the **stability of SARS-CoV-2** under several industrial processing situations in **dairies**, including pasteurization, freezing, and storage in acidic conditions. [JFood-Safety](#), 7 pages. (04.07.2021).

★★★ **Mushrooms:** An assessment conducted by the German Federal Office of Consumer Protection and Food Safety (BVL) identified **radioactive contaminants** in **70 of the 74 samples** of wild mushrooms tested between the years of 2015 and 2021. [BVL](#), 1 page. (08.10.2021).

★★★ **Pseudomonas:** An American brand that offers **vitamins, minerals, and food supplements** is voluntarily recalling two lots of its liquid probiotic for infants due to the possibility of contamination by ***Pseudomonas aeruginosa***. [FDA](#), 2 pages. (29.10.2021).

★★★ **Protozoa:** A systematic review and meta-analysis of scientific literature has been carried out to determine the **global prevalence of intestinal protozoan parasite** contamination in **fruits and vegetables**. [FoodControl](#), 45 pages. (02.11.2021).

★★★ **Pesticides:** An evaluation of **import provisions** for food products from third countries has been conducted, based on an analysis of RASFF notifications on pesticide residues between 2002 and 2020. **A need for improvement was identified** for products from Turkey, China and India. [FoodControl](#), 14 pages. (11.10.2021). An article looks into the **reasons for the high number of trade alerts** due to pesticide residues in foods imported from developing countries. [TheRottenApple](#), 1 page. (11.10.2021). Original publication: [Trade4DevNews](#).

★★ **Cryptosporidium: Infections** from the *Cryptosporidium* parasite **continue to rise** in Europe, according to a report published this month by the European Centre for Disease Prevention and Control (ECDC). [FoodSafetyNews](#), 2 pages. (10.10.2021). Original publication: [ECDC](#).

★★ **Canned food:** A study provides an overview of the **chemical contaminants** (metals, plastics, and biogenic amines) in preserved food and other canned and packaged products, such as drinks and powdered milk. [AffidiaJournal](#), 1 page. (25.10.2021). Original publication: [CritRevFoodSci](#).

★★ **Drinking water:** A study shows how water quality data, community water system maps and demographic data can **help identify** areas in which the resident communities are affected by **cumulative cancer risks** from **polluted tap water**. [EurekAlert!](#), 2 pages. (06.10.2021). Original publication: [IntJEnvResPubHe](#). **Contaminated water** is the **leading cause of large-scale outbreaks** of infectious diseases that can be transmitted from animals to people, researchers say. [MedicineNet](#), 2 pages. (02.11.2021),

★ **Berries:** An assessment conducted by DG SANTE in Ukraine focused on **viruses** and **bacteria** in **fresh and frozen berries**. The audit found there was no official system for monitoring, sampling and analysing fruit for export to the EU for microbial contaminants, meaning that **any such contamination would not be detected**. [FoodSafetyNews](#), 2 pages. (29.10.2021). Original publication: [EC.Europa](#).

Food fraud

★★★ **Detection methods:** Swiss botanists have developed a **model** that can be used to **determine the origin of food** in an efficient and low-cost manner. [PhysOrg](#), 2 pages. (11.10.2021).

★★ **Illegal production: Latvia's** Food and Veterinary Service (PVD) has discovered an **illegal food production plant** from which nearly two tonnes of unsanitary meat-based products have been removed and destroyed. [ENG.LSM.](#), 1 page (08.10.2021).

★★ **Statistics: Animal by-products, beef** and **alcohol** are among the product categories that have been part of **food crime investigations** in the United Kingdom. [FoodSafetyNews](#), 2 pages (05.10.2021).

Close up

★★★ **Mycotoxins:** An audit conducted by Swiss granum, the professional organisation for agriculture, in partnership with Agroscope, Switzerland's national centre for agricultural research, has identified that the **2021 cereal harvest** was more **contaminated with mycotoxins** than the corresponding harvest the year before. On the whole, however, the figures on contamination remain at a **low level**. [SchweizerBauer](#), 2 pages. (05.10.2021). Original publication: [ECDC](#).

★★★ **Hepatitis E:** A study has tested **commercial pig farms** in Switzerland for hepatitis E (HEV). Of the **138 farms tested, 81 were HEV positive** (58.8%) and most viral sequences belonged to a distinct cluster within subtype 3h (also commonly found in Swiss patients infected with HEV). [Animals](#), 17 pages. (25.10.2021).

★★★ **Per- and polyfluoroalkyl substances (PFAS):** Researchers in France have analysed **organic waste products used as fertilisers** in agricultural fields for **Per- and polyfluoroalkyl substances (PFAS)**. More than **90% of the samples** contained at least one PFAS, with up to 113 compounds detected in a single sample. [ScienceDaily](#), 2 pages. (20.10.2021). Original publication: [EnvironSciTechnol](#).

★★★ **Phthalates and plasticizers: Chicken nuggets, burritos and other popular products** sold in fast food restaurants in the US contain **dangerous chemical substances** such as **phthalates** and **plasticizers**, a study has found. [ScienceDaily](#), 2 pages. (27.10.2021). Original publication: [JExpoSciEnvEpid](#).

★★★ **Bioplastics:** A study focuses on the **use of degradation products from bioplastics** as fertilisers in areas such as **food production**. [EurekAlert](#), 2 pages. (28.10.2021). Original publication: [GreenChemistry](#).

★★ **Microbiome:** A recent study published by researchers in Germany has shown that, depending on the **composition of the host's intestinal microbiome**, **commensal E. coli** can **protect against infection** with Salmonella species. [ResearchInGermany](#), 2 pages. (06.10.2021). Original publication: [CellHostMicrobe](#).

★★ **Phthalates: Daily exposure to phthalates**, used in the manufacture of plastic food containers and many cosmetics, may lead to roughly **100,000 premature deaths** among older Americans each year. [ScienceDaily](#), 2 pages. (12.10.2021). Original publication: [EnvironPollut](#).

★★ **Aromatherapy:** An **aromatherapy spray** has been linked to an **outbreak of melioidosis** that resulted in the deaths of two people in the United States. The spray in question was found to contain the bacteria **Burkholderia pseudomallei**. [abcNews](#), 2 pages. (22.10.2021). More information: [CDC](#).

★★ **Ultra-processed foods:** Four weeks on a diet of highly processed food led to a **strong inflammatory response in the brains** of aging rats that was accompanied by behavioural signs of **memory loss**, a new study has found. [ScienceDaily](#), 3 pages. (14.10.2021). Original publication: [BrainBehavImmun](#).

★ **Purchasing habits and nutrition:** Products displayed in **prominent areas** in supermarkets often find their way into shopping trolleys. This fact could be used to help **improve nutrition**, a British study has shown. [Higgs](#), 1 page. (18.10.2021). Original publication: [PLOS](#). A new American study suggests that living in **neighbourhoods** with a higher number of **fast-food** outlets is associated with a **higher risk** of developing type 2 diabetes. [ScienceDaily](#), 3 pages. (29.10.2021). Original publication: [JAMA](#).

★ **Agricultural waste:** A research project based in the US aims to increase the scientific understanding of the **role of dust in the transfer of pathogens** such as *Salmonella* Newport, *S. Typhimurium* and *Escherichia coli* O157:H7 to produce. [FoodSafetyMagazine](#), 3 pages. (28.10.2021).

Want to receive each new issue of Seismo Info as soon as it's published? Click [here](#) to subscribe to the Food Safety and Nutrition newsletter.

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

Disclaimer: The presentation of articles reflects their media presence. The FSVO assumes no responsibility for the validity of the information obtained from the scanned media channels. The expressed views are not to be taken as an official opinion of the FSVO.



Seismo Info 10/2021



Source: mvcaspe, Fotolia

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

[FSVO website](#)

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

Food trends

★★★★ **Cannabinoids:** A recent study has identified an **increase** in reported cases of **acute encephalopathy** – a disease which affects the brain – as well as **respiratory depression** or **hypotension** among **children** below the age 10, linked to the accidental ingestion of cannabis-based products. [IrMedJ](#), 7 pages. (20.09.2021).

★★★★ **Ultra-processed foods:** A Swiss study identified that the **proportion of ultra-processed food** was **strongly** and dose-dependently **associated** with **excess body weight** in women, but not in men. [Obesity](#), 9 pages. (23.02.2021). The increase of **online 'junk food' marketing** aimed at **children** since the start of the COVID-19 pandemic poses a long-term **health risk** and has become a major public health concern, experts confirm. [FoodNavigatorAsia](#), 3 pages. (28.09.2021).

★★★ **Chrono-nutrition:** The concept of chrono-nutrition is gaining traction in Japan. Companies are developing products based on this concept, which is based on the principle that the **circadian rhythm** influences how our bodies **absorb nutrients**. [NutraIngredientsAsia](#), 1 page. (10.09.2021).

★★ **Animal protein surrogates:** The **alternative protein** market has exploded with a wave of **innovation** in taste, texture and formats to meet uncompromising demands for meat protein-mimicking market offerings. [FoodNavigator](#), 2 pages. (22.09.2021)

★ **Freezing:** A new method for freezing food, called **isochoric freezing**, could make for **safer** and **better quality** frozen foods while saving energy and reducing carbon emissions. [ScienceDaily](#), 2 pages. (02.09.2021). Original publication: [RenSustEnRev](#).

★ **Laser cooking:** A team of American researchers recently demonstrated that **several different types of lasers** can be used to **cook** 3D-printed **chicken** thoroughly, with no adverse effects on the food's taste. [Gizmodo](#), 2 pages. (20.09.2021).

Unusual outbreaks

★★★ **Novel outbreak-associated food vehicles** Analysis of data from the Centers for Disease Control and Prevention (CDC)'s Foodborne Disease Outbreak Surveillance System in the USA has made it possible to identify **28 foods as vehicles for food poisoning**. [EmergingInfectiousDiseases](#), 6 pages. (10.2021).

★★★ **Campylobacter:** A site used for harvesting **shellfish** has been closed in the United States following **seven cases** of *Campylobacter* **poisoning** linked to products originating from that site. [FoodPoisoningBulletin](#), 1 page. (14.09.2021).

Food safety

★★★ **E. coli ST131:** The Federal Food Safety and Veterinary Office (FSVO) has published a new briefing letter on the topic of *E. coli* ST131. [FSVO](#), 2 pages. (19.09.2021).

★★★ **Cannabinoids:** The US-based Health Alert Network (HAN) has issued an **alert** regarding the increased availability of cannabis-based products containing **Delta-8 tetrahydrocannabinol (THC)** and the risk of adverse effects due to the **insufficient labelling** of products containing **THC** and **cannabidiol (CBD)**. [HAN](#), 3 pages. (14.09.2021). The cantonal chemists in the Swiss Canton of **Solothurn** have launched a **campaign against cannabis-based products**. Each of the 26 samples analysed was found to be **in breach of regulations**. [Solothurn-erZeitung](#), 4 pages. (26.09.2021).

★★★ **1,3-DCP and 3-MCPD:** As part of Germany's **National Monitoring Programme 2020**, **food contact materials made from paper** were examined in order to detect any release of 1,3-Dichloropropan-2-ol (**1,3-DCP**) and 3-monochloropropane-1,2-diol (**3-MCPD**). The results show that **greater consideration** needs to be given to this issue in **official testing**. [BVL](#), 8 pages. (24.09.2021).

★★ **Insects:** Researchers have analysed the **microbiological** and **chemical quality** of **edible insects** on sale in Canada (testing for *E. Coli*, *Salmonella*, *pesticides* and *heavy metals*). All of the products analysed were found to be **fit for human consumption**. [Affidia](#), 1 page. (09.09.2021). Original publication: [JFoodProt](#).

★★ **Cronobacter:** Researchers in Poland have found **Cronobacter** in samples of **nuts** and **dried fruit**. 50% of the nut samples and 25% of the samples of mixes of dried fruits, seeds and nuts were found to be contaminated by the bacteria. [FoodSafetyNews](#), 2 pages. (05.09.2021). Original publication: [Pathogens](#). A recent publication summarises the current understanding on the **connection between Cronobacter infections and infants**, and highlights the potential efficacy of **probiotics**, **prebiotics** and **synbiotics** in **reducing invasive Cronobacter infections** during early infancy. [FoodMicrobiol](#), 1 page (abstract). (27.09.2021).

★★ **Baby food:** According to a report published at the start of 2021, commercial **baby foods** sold in the USA are **tainted** with significant levels of toxic heavy metals (Seismo Info 03 2021). New disclosures show **dangerous levels of toxic heavy metals** in **even more** baby food. [USHouseOfRepresentatives](#), 25 pages. (29.09.2021).

★★ **PFAS:** One of the **largest** PFAS (Per- and polyfluoroalkyl substances) **contaminations** in the world, both in terms of geographical area and the number of people affected involved, has occurred in the provinces of Vicenza, Verona, and Padua in **North-East Italy**. [Affidia](#), 1 page. (27.09.2021). **Harmful** and environmentally damaging **chemicals**, including per- and polyfluoroalkyl substances (PFAS), have been discovered in **food packaging** in the Republic of Ireland, including in packaging used by two well-known brands. [TheTimes](#), 1 page. (03.10.2021). Original publication: [Voice](#).

★ **Aromatic herbs:** An American company **is recalling its parsley** after tests revealed a possible contamination with **Shiga toxin-producing E. coli**. [FDA](#), 2 pages. (10.09.2021). Coriander has been identified as the **possible cause** behind an outbreak of **Salmonella Oranienburg** in the United States. [FoodSafetyNews](#), 1 page. (26.09.2021).

★ **Mushrooms:** At least **three people have died** and hundreds were taken ill in France in the past two months after eating **wild mushrooms**. The majority of cases were linked to picked mushrooms, but in 4.5% of cases, they had been bought in a market or shop. Data from Tox Info Suisse, the Swiss poisons information centre, revealed at least **76 mushroom poisoning cases in Switzerland** in 2020 including **two deaths**. [FoodSafetyNews](#), 2 pages. (09.09.2021).

★ **Biofilm:** A study has analysed the **biofilm** ability of 69 strains of **Campylobacter** spp. and species of the **Arco-bacteraceae** family. The results demonstrated the biofilm formation ability of many strains, which poses a considerable **risk to the food industry**, medical practice, and human health. [Microorganisms](#), 14 pages. (23.09.2021).

Food fraud

★★★ **COVID-19:** A new article examines the **impact of the COVID-19 pandemic** on **food fraud**. [SpecialtyFoodMagazine](#), 3 pages. (13.09.2021). More information: [FoodAuthenticityNetwork](#).

★★★ **Salmon: Salmon** is thought to be liable to **food fraud** and is at the heart of a **growing number** of scientific investigations, conservation campaigns, documentary films, and multiple recent class-action lawsuits. [NationalGeographic](#), 8 pages. (24.09.2021).

★★ **Fraud in Europe:** The European Commission has released the **annual report** of the EU Agri-Food Fraud Network (EU FFN) and the Administrative Assistance and Cooperation system for Food Fraud (AAC-FF). 2020 saw a **20% increase in the number of reported cases** compared to 2019, with the most affected categories being **fats and oils, fish and meat products**. [Affidia](#), 1 page. (09.09.2021). Original publication: [EuropeanCommission](#).

★ **Chili: Chili powder** is a common target for food fraud by mixing it with **brick powder**, the Food Safety and Standards Authority of India (FSSAI) reports. [TimesOfIndia](#), 1 page. (30.09.2021).

★ **Organic products:** A recently published article takes a look at the topic of **food fraud** in the production and sale of **organic products**. [FoodCircle](#), 2 pages. (2021).

Close up

★★★ **Epidemiology:** A study recently attempted to find a **correlation** between **Internet search terms** and **norovirus infection**, thereby providing evidence of a new Internet search-based research strategy for epidemiology. [EXBulletin](#), 1 page. (30.09.2021). Original publication: [JMedInternetRes](#).

★★★ **COVID-19:** During **2020**, FoodNet (the American Foodborne Diseases Active Surveillance Network) identified **26% fewer infections** compared with the average annual number during 2017–2019. [CDC](#), 5 pages. (24.09.2021). Among a cohort of 432,302 Americans aged 2–19 years, the rate of **body mass index (BMI) increase** approximately **doubled** during the pandemic compared to a pre-pandemic period. [CDC](#), 6 pages. (17.09.2021).

★★★ **Metallic trace elements:** A recently published article highlights the **importance of metallic trace element speciation** in food. [SCA](#), 4 pages. (30.09.2021).

★★★ **Norovirus:** A study has shown that **lettuce-encapsulated bacteria** can express Norovirus receptor-like substances and thus **protect Norovirus** from **disinfection** practices. [FrontiersInMicrobiology](#), 10 pages. (07.09.2021).

★★★ **Food-grade wax:** **Food-grade waxes** are applied to **many produce items**, such as apples, before storage and distribution to control post-harvest decay and extend shelf life. A project is examining how **different waxes** and the **waxing step impact microbial food safety**. [FoodSafetyNews](#), 2 pages. (30.09.2021). More information: [CPS](#).

★★ **Nutri-score:** The International Agency for Research on Cancer (IARC) has published a report suggesting Nutri-Score is the **most effective nutrition label** in helping **lower the risk** of non-communicable diseases (NCDs) such as cancer. [FoodNavigator](#), 3 pages. (08.09.2021). Original publication: [BMJ](#).

★★ **Soya:** Japanese researchers have found that **coating soybean plant leaves** with **cellulose nanofiber** offers **resistance to infection** with the Asian soybean rust pathogen. [EurekAlert!](#), 2 pages. (07.09.2021). Original publication: [FrontiersInPlantScience](#).

★★ **Omega 3:** A recent study posits that Omega 3 may **beneficially alter** the composition of the **gut microbiome** and lead to increases in the production of short chain fatty acids. The study's authors suggest that Omega-3 acids could therefore potentially **be classed as prebiotics**. [FoodNavigator](#), 2 pages. (03.09.2021). Original publication: [Gut-Microbes](#).

★★ **Obesity:** A recent article **calls into question** the “**Energy Balance Model**”, which postulates that individuals gain weight due to consuming more energy than they burn off. According to the author, the obesity crisis is due in part to **hormonal responses to changes in the quality of the food ingested**. [ScienceDaily](#), 2 pages. (13.09.2021). Original publication: [AmJCNutr](#).

★★ **Nutritional quality:** A recent study by the European Joint Research Centre (JRC) analysed **trends in the nutritional quality** of **packaged food** and **non-alcoholic beverages** by assessing the level of sugars, salt, saturated fat and fibre of these products sold in supermarkets across Europe. [EUScienceHub](#), 3 pages. (04.08.2021). Original publication: [Nutrients](#).

★★ **Algae:** A recent publication released as part of the “One Health Harmful Algal Bloom System (OHHABS)” provides a summary of **reported harmful algal bloom events** and their health impact in the United States in 2019. [CDC](#), 10 pages. (2021).

★ **Hepatitis A:** The South Korea-based Korea Disease Control and Prevention Agency (KDCA) has announced that the nation reported more than **100 cases of Hepatitis A per week** since the 11th week of 2021. This equates to more than **double** the number of cases reported during the same period last year. [KoreaBiomedReview](#), 2 pages. (15.09.2021).

★ **Nano and microplastics:** In agriculture, large quantities of **nano- and microplastics** end up **in the soil** through compost, sewage sludge and the use of mulching foils. Scientists have now determined that the plastic particles release the pollutants in the upper soil layers and have a **negative effect** on soil microbes and **crops**. [ScienceDaily](#), 2 pages. (16.09.2021). Original publication: [Nature](#). A recent report provides an overview of an **inter-laboratory comparison (ILC) study on microplastics in water** organised by the Joint Research Centre (JRC) of the European Commission in collaboration with the German Federal Institute for Materials Research and Testing (Bundesanstalt für Materialforschung und –prüfung, BAM). [JRCPublications](#), 276 pages (2021). American researchers have found much higher levels of one type of microplastic, known as polyethylene terephthalate (PET), when comparing the stools of adults and children. They believe that the higher levels in babies could be down to exposure from baby products like dummies or crawling on carpets that contain the chemicals. [DailyMail](#), 5 pages. (22.09.2021).

★ **Fats:** A higher consumption of **dairy fat** may be linked to a **lower risk of cardiovascular disease**, according to new research that suggests choosing full-fat dairy options is no worse for heart health. [TheGuardian](#), 3 pages. (21.09.2021). Original publication: [PLOS](#).

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

Disclaimer: The presentation of articles reflects their media presence. The FSVO assumes no responsibility for the validity of the information obtained from the scanned media channels. The expressed views are not to be taken as an official opinion of the FSVO.



Seismo Info 09/2021



Source: mvcaspe, Fotolia

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

[FSVO website](#)

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

★★★★ **Survey:** In June, we asked for your views as part of our survey on early detection for food safety. The results of the survey are summarised in a report available on the [FSVO website](#).

Food trends

★★★★ **Upcycling:** A company is making **paper packaging** products for the **food industry** using **crop waste materials** such as apple skins, avocado peel and mango pits. [FoodNavigator](#), 3 pages. (28.07.2021).

★★★★ **Chocolate:** The chocolate of tomorrow could be made in a **bioreactor**: a team of researchers based in Switzerland has developed a **lab-grown chocolate**. [SwissInfo](#), 4 pages. (08.07.2021).

★★★★ **Ultra-processed foods:** Researchers have studied **trends in the consumption** of ultra-processed foods among **young Americans** from 1999 to 2018. It was found that the proportion of energy intake provided by the consumption of such food increased over that period and comprised the **majority of their total energy intake**. [JAMA](#), 1 page (abstract). (10.08.2021).

★★★ **Food preservation:** Many people rediscovered the art of **home food preservation** during the pandemic. An article highlights the most important points for ensuring **food safety** when preparing these foods. [HZ](#), 3 pages. (19.08.2021). The Food Standards Agency (FSA), which is responsible for food safety in the UK, has analysed the **effects of freezing** food on its **use-by date** in terms of **microbiological safety**. [FoodSafetyMagazine](#), 1 page. (18.08.2021). Original publication: [FSA](#).

★★★ **Protein:** Researchers have shown that using solar panels to produce **microbial protein** – which is rich not just in proteins but also in other nutrients – is **more sustainable, efficient and environmentally friendly** than growing conventional crops. [ScienceDaily](#), 2 pages. (30.07.2021). Original publication: [PNAS](#).

★★★ **Milk substitutes:** A team has demonstrated that **fermenting** drinks fortified with **pea and rice proteins** yields the **same quality of protein as casein**, an animal protein found in milk. [ScienceDaily](#), 2 pages. (28.07.2021). Original publication: [JFoodSc](#).

★★★ **Mushrooms:** Mushrooms will **play a key role** in **nutrition** and **immune health** in future, according to a recent report. [FoodNavigator](#), 2 pages. (18.08.2021).

★★★ **Fruitarianism:** **Plant-based diets** have become increasingly **popular** in recent years, both for health and ethical reasons. One extreme form of plant-based diet is “fruitarianism”, a diet based largely on the **consumption of raw fruit**. [TheConversation](#), 4 pages. (25.08.2021).

Unusual outbreaks

★★★★ **Norovirus:** Imported **frozen mixed berries** are suspected to be behind an **outbreak** of norovirus in Switzerland. [FoodSafetyNews](#), 2 pages (13.08.2021). An **outbreak of gastroenteritis** in Brazil, caused by norovirus, has been linked to the consumption of **ice pops**. [FoodAndEnvVir](#), 7 pages. (05.08.2021).

★★★★ **E. coli:** An epidemiological investigation has identified **salad** used in pre-packed **sandwiches** as the **likely source** of an **outbreak** of *E. coli* serotype O26:H11 in the United Kingdom in 2019. [EpidemiologyAndInfection](#), 10 pages. (10.08.2021). The use of the **swimming pool** and/or **splash pad** at a park has been associated with **several cases of infection with E. coli O157** in the United States. [FoodSafetyNews](#), 2 pages. (11.08.2021). Original publication: [MSDH](#). In Finland, the National Institute for Health and Welfare (THL) and the Finnish Food Authority (Ruokavirasto) have issued a **warning** after a number of *Escherichia coli* infections were linked to the consumption of **hamburger patties**. [MesVaccins](#), 2 pages. (21.08.2021).

★★★ **Hepatitis A:** Australian officials have reported three hepatitis A infections linked to **dates imported** from Jordan. The **strain is identical** to the one that caused an outbreak of hepatitis A in the United Kingdom earlier this year (see Seismo Info 05 2021). [FoodSafetyNews](#), 2 pages. (09.07.2021).

★★★ **Salmonella:** 176 people have been affected by an **outbreak** of salmonella linked to **pork-based snacks** in the UK. [FSA](#), 2 pages. (21.08.2021).

Food safety

★★★★ **Allergens:** The Federal Food Safety and Veterinary Office (FSVO) has published a **new briefing letter** on the topic of **undeclared allergens**. [FSVO](#), 3 pages (14.09.2021). A joint Food and Agriculture Organisation of the United Nations (FAO) and World Health Organisation (WHO) **expert consultation** on the risk assessment of food allergens has published the results of its review to establish **threshold levels** for the **priority allergens in food**. [FAO/WHO](#), 9 pages. (20.08.2021).

★★★★ **6-PPD:** It has been discovered that the **degradation product** of the chemical 6-PPD, which is commonly used to protect car tyres from Ozone, is **highly toxic**: contamination of waterways by **6-PPD quinone** is responsible for the **mass deaths** of Coho **salmon**. A recently published article explores what this means for food systems and why it is **important** to develop **detection methods**. [FoodNavigator](#), 3 pages. (09.08.2021). More information: [Science](#).

★★★★ **Giardia:** A recently published article describes the **first documented outbreak** of giardiasis infections in humans in Italy. The outbreak affected more than **200 people** over the course of several months. Epidemiological investigations indicated that **tap water** was the most likely source of infection. [Eurosurveillance](#), 9 pages. (02.09.2021).

★★★★ **Listeria monocytogenes:** A study has used 10 years of **surveillance data** to describe **listeriosis frequency** in **Germany**. The authors conclude that the **aging** of the population of Germany may partially explain the **increase in cases** and the median age of patients [EmlnfDis](#), 5 pages. (09.2021).

★★★★ **Alerts and recalls:** DG SANTE, the European Commission's Directorate-General for Health and Food Safety, has just published the Rapid alert system for food and feed (**RASFF**) **annual report for 2020**. [EC.Europa](#), 40 pages (2021).

★★★★ **Mustard:** It is believed that the 2021 European **wheat** harvest was **heavily contaminated with mustard**. Source: communication from the Republic of Ireland to all RASFF member states (30.07.2021).

★★★ **Gluten:** New research has identified **gluten-like proteins** in a **common weed**. These proteins could cause chaos for farmers growing gluten-free crops such as millet, buckwheat and sorghum, and **cause allergic reactions** in people with a gluten intolerance or **celiac disease**. [ScienceDaily](#), 2 pages. (29.07.2021). Original publication: [FrontiersInNutr](#).

★★★ **Salmonella:** An American company has **recalled crisps** due to potential contamination with *Salmonella*. The contamination is believed to be linked to the **seasoning** used to flavour the crisps. [FoodSafetyNews](#), 2 pages. (10.07.2021). Original publication: [FDA](#).

★★★ **Drinking water:** A recent study presents the structure and organisation of the **new French surveillance system for monitoring waterborne disease outbreaks** (WBDOs), which is based on an integrated analysis of various data sources ("big data") and on environmental investigations. [Eurosurveillance](#), 11 pages. (26.07.2021).

★ **Epidemics and recalls:** A study has revealed that the **number of cases of illness** during **recall-associated outbreaks** has increased. **Improvements** to the **identification** and **traceability** of rarely recalled foods could lead to more recalls of these products, resulting in **fewer illnesses** and deaths. [EpidemiologyAndInfection](#), 10 pages. (19.07.2021).

★ **Haff disease:** Following the identification of a case of Haff disease in Brazil (see Seismo info 08 2021), Brazilian authorities are on **alert** after an **increase** in the number of people suspected of **having the disease**. At least 25 cases are currently under analysis. [ProMedMail](#), 3 pages (29.07.2021).

★ **Meat:** In 2020, health authorities in the German state of Lower Saxony (Niedersachsen) collected 99 samples from **sausages** and other **meat-based products** to determine their **microbiological** and **sensory quality** at the **end of their shelf-life**. Seventeen of the samples evidenced both deviations from the sensory norm and an increased bacterial presence; eight samples presented **increased levels of bacteria** while their **sensory properties** remained **within the norm**. [Laves](#), 2 pages. (2021).

Food fraud

★★★★ **Greenwashing:** The world's **largest pork exporter** is being taken to court for greenwashing over its **marketing claim** that its bacon comes from "climate-controlled pigs". [CPCPost](#), 1 page. (11.08.2021).

★★★★ **Sesame oil:** The Chinese government has published new consumer **guidelines** regarding sesame oil. Consumers are being advised to look out for **adulterated or blended products**. [FoodNavigatorAsia](#), 3 pages. (23.08.2021).

★★★ **Allegations:** An **online tea company** in the United States has been **put on notice** by the Food and Drugs Administration (FDA) for claims made about its tea's ability to mitigate, prevent, treat, diagnose, or cure **COVID-19**. [FoodSafetyNews](#), 3 pages. (30.08.2021). Original publication: [FDA](#).

Close up

★★★ **Floods:** The danger posed by **flood water** is often underestimated: rivers swirl up **pollutants** that stem from environmental pollution produced decades or centuries ago. These **harmful substances** can not only cause ecological damage in the river; they can also deposit themselves on flooded areas and **affect crops, grazing livestock and humans**. [ScienceDaily](#), 2 pages. (02.08.2021).

★★ **Campylobacter:** A **rise** in the number of people falling ill from *Campylobacter* has been reported in recent weeks in Sweden. The spike in human cases was **preceded** by an **increase** of *Campylobacter* in **broiler flocks**. [FoodSafetyNews](#), 2 pages. (24.08.2021).

★★ **COVID-19:** The Food and Agriculture Organisation (FAO) has updated its Guidance for **preventing the transmission** of COVID-19 within **food businesses**. [FAO](#), 11 pages. (02.08.2021). Researchers have estimated and compared the **impact of the COVID-19 epidemic** on **norovirus** and *Campylobacter* surveillance data in England. From this data, they concluded that the reporting of norovirus was more adversely affected than that of *Campylobacter* by the pandemic. [PLOS](#), 12 pages. (25.08.2021).

★★ **Nutrition:** Researchers have discovered **differences** in the ways in which a diet high in **ultra-processed foods** impacts the **gut biome** in **men and women**. They also identified that certain **bacteria** are associated with **specific groups of ultra-processed foods**. [NutraIngredients](#), 2 pages. (12.08.2021). Original publication: [Nutrients](#). Eating a **plant-centered diet** during young adulthood is associated with a **lower risk of heart disease** in middle age, according to a long-term study with about 30 years of follow-up. [ScienceDaily](#), 4 pages. (04.08.2021). According to one study, more than 85% of **food products aimed at children** are **unhealthy**. [Foodwatch](#), 3 pages. (25.08.2021).

★★ **Salt:** According to a recent study, **replacing** table salt with a sodium-reduced, **potassium-based alternative** would **“save millions of lives”**. [FoodNavigator](#), 3 pages. (31.08.2021).

★★ **Saturated fats:** A recent study has analysed how saturated fats from **different dietary sources** – notably meat and dairy – impact the risk of **cardiovascular disease**, **ischaemic heart disease** and **stroke**. [FoodNavigator](#), 3 pages. (26.08.2021).

★★ **Circular economy:** Some countries could be moving closer to using **human waste** as **fertiliser**, closing the loop to more circular, sustainable economies. [ScienceDaily](#), 3 pages. (19.08.2021). Original publication: [Environ-SciTechnol](#).

★ **Legionellosis:** The **number of cases** of legionellosis in the German State of Baden-Württemberg has recently **increased significantly**. 97 cases, of which 7 were fatal, were recorded between mid-June and around 6 August – the highest increase in reported cases during that period for any year between 2001 and 2020. [Stuttgarter-Nachrichten](#), 3 pages. (10.08.2021).

★ **Marine toxins:** A recent study has demonstrated the potential for the **use** of either **specific bacteria** or selected bacterial components to **reduce the level of harmful marine toxins** in **aquaculture** and **food production**. [FoodControl](#), 24 pages. (15.07.2021).

★ **Arcobacter:** The French Food Chain Health Monitoring platform (SCA) has published an **overview** of this type of bacteria, its potential **spread** and the **risk factors associated with it**. [SCA](#), 5 pages. (25.08.2021).

★ **Obesity: Chlorpyrifos**, which is widely sprayed on fruits and vegetables in many parts of the world, may be partially **responsible** for the **global obesity crisis**. [ScienceDaily](#), 1 page. (27.08.2021). Original publication: [NatureCommunications](#).

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

Disclaimer: The presentation of articles reflects their media presence. The FSVO assumes no responsibility for the validity of the information obtained from the scanned media channels. The expressed views are not to be taken as an official opinion of the FSVO.



Seismo Info 08/2021



Source: mvcaspel, Fotolia

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

[FSVO website](#)

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

Food trends

★★★★ **Upcycling:** The Federal Food Safety and Veterinary Office (FSVO) has published a **new briefing letter** on the topic of upcycling. [FSVO](#), 2 pages. (22.07.2021).

★★★★ **Packaging:** New packaging made of **chitosan**, essential oils and nanoparticles has been developed to preserve the freshness of **strawberries**. Chitosan is a food industry by-product that has **antifungal** properties. [RenewableCarbon](#), 1 page. (16.07.2021).

★★★★ **Cannabinoids:** The German Federal Institute for Risk Assessment (BfR) has published some **FAQs** about the risks of **foods** containing **hemp derivatives** (cannabinoids). [BfR](#), 9 pages. (16.07.2021).

★★★ **Microbiome:** US researchers have identified **ingredients for snacks** that have been formulated to deliberately **change the gut microbiome** in ways that could **promote health**. [WUSTL](#), 4 pages. (23.06.2021). Original publication: [Nature](#).

★★ **Meat substitutes:** The nutritional content of plant-based meat substitutes has been compared to beef with the aid of a tool known as “**metabolomics**”. The analysis of 36 samples found that 171 out of the 190 metabolites they measured varied between beef and the meat substitute indicating that they are **not nutritionally equivalent**. [EurekAlert!](#), 2 pages. (06.07.2021). Original publication: [NatScRep](#). An article examines the **ultra-processed** aspect of plant-based meat substitutes. [TheConversation](#). 3 pages (08.07.2021). Producing cell-cultured meat, making milk proteins through fermentation and using krill – these are some of the processes described in a new publication on the **possibilities for producing substitutes for animal-based products**. [FoodBusinessNews](#), 5 pages. (08.07.2021).

★★ **Colostrum:** Market research indicates that bovine **colostrum sales** are set to soar amongst the **sports nutrition** boom. [FoodNavigator](#), 2 pages. (19.07.2021).

Unusual outbreaks

★★★ **Cryptosporidiosis:** An outbreak of cryptosporidiosis that affected **40 people** in **Ireland** this past year has been linked to **salad from one farm**. [FoodSafetyNews](#), 2 pages. (06.07.2021). Original publication: [IrishMedJ](#).

★★★ **Norovirus:** **England** is facing an **increase** in norovirus outbreaks at a time of year when the virus is usually almost absent. [EuroWeeklyNews](#), 2 pages. (23.07.2021).

★★★ **E. coli:** The US health authorities are warning people **not to eat raw cake batter** as they investigate an **outbreak** of *E. coli* linked to cake mix. 16 people in 12 states have been infected with the same strain of *E. coli*. [CNN-Health](#), 1 page. (05.08.2021). Original publication: [CDC](#).

★★ **Lettuce:** Imported lettuce has been identified as the cause in the follow-up on an **outbreak of salmonella** in **Finland**. The lettuce has been confirmed as the source of an outbreak that affected about **450 children** and **nursery** staff. [OutbreakNewsToday](#), 1 page. (07.07.2021). In the USA, **ready-to-eat lettuce** is linked to an outbreak of **Salmonella Typhimurium**. [CDC](#), 1 page. (15.07.2021).

★★ **Yersinia enterocolitica:** More than **100 people** were sickened during a Yersinia outbreak linked to **pasteurised milk** in the USA in 2019. Raw milk may have **cross-contaminated** pasteurised milk during production. [FoodSafetyNews](#), 3 pages. (21.07.2021). Original publication: [FoodbornePathAndDisease](#).

Food safety

★★★ **Arcobacter:** A study aimed at evaluating the presence of *Arcobacter* spp. and the occurrence of virulence factors, as well as to genotype *Arcobacter*, in **ready-to-eat vegetable** samples in **Italy**. *Arcobacter* was **detected in 14.5%** of the samples. [ItJFoodSafety](#), 1 page. (2021).

★★★ **Epidemiology:** Switzerland is seeing a **decline in most infections** for **2020**. *Campylobacter* and *Salmonella* infections decreased, while *Listeria* was stable despite a large outbreak. Enterohemorrhagic *E. coli* reports fell for the first time since 2014. [FoodSafetyNews](#), 3 pages. (24.07.2021). Original publication: [FSVO](#). More information: [FOPH](#). A study has described how the **lessons from major foodborne outbreaks** have helped **improve Europe's food safety system**. [FoodSafetyNews](#), 2 pages. (12.07.2021). Original publication: [JFoodProt](#).

★★★ **Pyrrrolizidine alkaloids:** The Federal Food Safety and Veterinary Office (FSVO) has conducted a study to determine the presence of **pyrrrolizidine alkaloids** (PA) in **tea, herbal teas** and **iced tea**, as well as the **transfer rate of PA** from tea leaves to the prepared beverage. [FoodAdditivesAndCont](#), 21 pages. (08.07.2021).

★★★ **Sushi:** Researchers have analysed the **concentrations of various toxic elements** (cadmium, nickel, lead, mercury, inorganic arsenic and methylmercury) and iodine in a hundred pieces of sushi. They also calculated **dietary exposure** to all of these contaminants in various population groups and **evaluated the risks to health**. [NewFoodMag](#), 2 pages. (16.07.2021). Original publication: [FoodAndChemTox](#).

★★★ **Encephalitozoon cuniculi:** A study has evaluated the effect of **pasteurisation** and **coagulation** during **goat's cheese** production on the **infectivity** of *Encephalitozoon cuniculi* **spores**. The results showed that the spores **are able to remain viable** and thus fresh and soft cheeses should be considered a **potential source of microsporidia**. [FoodbPathAndDis](#), 1 page (abstract). (11.05.2021).

★★★ **Vibrio:** An **outbreak** of vibriosis in Washington (USA) has already surpassed the **highest number of cases** ever recorded by the state for the month of July. Recent **high temperatures** and **low tides** are likely to blame for the increased rate of illness, which is associated with eating raw or undercooked **shellfish**, especially oysters. [FoodPoisonJournal](#), 1 page. (19.07.2021).

★★ **Listeria monocytogenes:** A US company has announced the **recall of frozen, fully cooked chicken** due to **possible contamination** with *L. monocytogenes*. [OutbreakNewsToday](#), 1 page. (05.07.2021). A new publication reviews the **control of L. monocytogenes** in **ready-to-eat meat and poultry** products. [TrendsFoodScAndTech](#), 12 pages. (10.07.2021).

★★ **Per- and polyfluoroalkyl substances:** The US Food and Drug Administration (FDA) has published the results of analyses collected from a **total diet study** (TDS). Out of 94 samples, only one sample of **cod** had **detectable levels of two types of PFAS** – perfluorooctane sulfonate (PFOS) and perfluorononanoic acid (PFNA). The FDA has determined that the PFAS levels found in this sample do **not present a human health concern**. [FDA](#), 2 pages. (30.06.2021).

★★ **Phasin:** The German Federal Institute for Risk Assessment (BfR) is warning people about the **risks of eating raw beans**. Raw beans contain a toxin, phasin, which can be **toxic** even in minimal doses. Cooking destroys the toxin, which is why it is necessary to cook beans. [BfR](#), 1 page. (09.07.2021).

★★ **Clostridium botulinum:** A new publication reviews the **cases of botulism in the USA** between 2001 and 2017. Surveillance data, outbreaks of botulism affecting 10 or more people, and the public health preparedness and response approach are examined. [FrontiersInMicrobiology](#), 5 pages. (16.07.2021).

★★ **Haff disease:** Officials in Brazil have issued a warning after a woman became sick from Haff disease, or black urine disease. This is a **rare disease caused by an as-yet-unidentified toxin** present in certain **fish**. It is not known if the odourless and tasteless toxin, which cannot be destroyed by cooking, is caused by fish not being properly stored or by what they eat. [FoodSafetyNews](#), 1 page. (18.07.2021).

★★ **Microplastics:** A new study has found **plastic accumulation** in foods may be **underestimated**. There is also concern these microplastics will carry bacteria such as *E. coli*, which are commonly found in coastal waters, up the food chain. [UniPortsmouth](#), 2 pages. (26.07.2021). Original publication: [SciTotEnv](#). **Ruminants** could be allies in the world's fight against plastic pollution. Research by scientists in Austria shows that the microbes found in **cattle stomachs** can **break down** certain kinds of plastic. [Anthropocene](#), 2 pages. (22.07.2021).

★ **Bacteriophages:** A recently published article discusses the **potential of bacteriophages** to improve the **safety** of food and water. [IFT](#), 4 pages. (01.07.2021).

★ **Pre-cut fruit:** A French newspaper is warning people about the **potential risks** (listeriosis, salmonellosis) of fruit that is sold **pre-cut** and **unrefrigerated**. [MarseilleNews](#), 2 pages. (20.07.2021).

Food fraud

★★★ **Fraud:** A publication reviews the issue of **fraud and authenticity throughout the food supply chain**. The **impact** of food fraud on both consumers and manufacturers, the current and future **trends** in food fraud and **methods of defence** that are currently in use are discussed. [FoodControl](#), 15 pages. (21.04.2021). The German authorities have found **incorrect information** on **meat products** concerning the **animal species** declared, while in the case of **honey**, adulteration by **adding foreign sugars** was also detected. [BVL](#), 1 page. (21.07.2021). More than **15,000 tonnes** of food and drink worth **USD 60 million** has been seized **globally** in operations targeting fake and potentially dangerous products. The top seized goods by quantity were **alcohol and food supplements**, followed by cereals and grain products and fruit and vegetables. [FoodSafetyNews](#), 3 pages. (22.07.2021).

★★★ **Ethylene oxide:** European countries are facing more **ethylene-oxide-related recalls** after the substance was detected in a **food additive** used in a range of products. Belgium first raised the alarm in September 2020 about ethylene oxide in **products from India** with **sesame** seeds. These recalls are still continuing with thousands of conventional and organic items. [FoodSafetyNews](#), 3 pages. (20.07.2021).

★★ **Rice:** One of Australia's top food brands has fallen victim to **rice counterfeiting** perpetrated by a criminal group based in Eastern Europe, which has resulted in knock-offs of its products being found in more than a dozen countries worldwide. [SecuringIndustry](#), 1 page. (07.07.2021).

★★ **Rum:** International operations broke up a **criminal scheme** that had infiltrated the European market with **counterfeit rum** from Central America. [EC-OLAF](#), 1 page. (06.07.2021).

★★ **Chocolate:** A system of **biomarkers** could improve **traceability** in chocolate production. [TheConversation](#), 2 pages. (14.07.2021). Original publication: [SupplyChainManagement](#).

★★ **Fish: Nearly half (46%)** of seafood samples in restaurants and grocery stores in four major Canadian cities **were mislabelled**, according to a new report. [SeafoodSource](#), 1 page. (04.08.2021). Original publication: [Oceana](#).

Close up

★★★ **Antibiotic resistance:** The third joint inter-agency (ECDC, EFSA, EMA) report on integrated analysis of **antimicrobial agent consumption** and occurrence of **antimicrobial resistance** in bacteria from humans and food-producing animals (JIACRA) has been published. [ECDC](#), 164 pages (30.06.2021). A US study shows that there may be **more antibiotic-resistant salmonella** in our food animals than previously thought. Using new technology, the researchers found that 60% of cattle faecal samples contained **multiple strains** of salmonella that **traditional testing methods missed**, and that about one out of every 10 samples tested positive for an antibiotic-resistant strain called **Salmonella Reading**. [EurekAlert!](#), 2 pages. (30.06.2021). Original publication: [AntimAgAndChem](#).

★★★ **Campylobacter coli:** According to a recently published study, hyper-aerotolerant *Campylobacter coli* from **swine** may pose a **potential threat** to public health based on its **quinolone resistance**, **virulence** and **genetic relatedness**. [FrontiersInMicrobiology](#), 11 pages (16.07.2021).

★★★ **Legionella:** Japanese researchers have examined the **prevalence of Legionella** in **aerosols** collected near **asphalt roads**, in **public toilets** and other indoor sites. The results suggest that there may be a **risk of exposure** to *Legionella* both in toilets and in **areas near asphalt roads**. [BMCMicrobiology](#), 12 pages. (17.07.2021).

★★★ **Heavy metals:** Fresh research published by France's public health agency has revealed **the presence of arsenic, chromium, cadmium and mercury**, amongst others, **in a majority of adults and children in France**. [FoodNavigator](#), 2 pages. (13.07.2021). Original publication: [SantéPublFR](#).

★★★ **One Health:** International organisations have come together to launch a new “One Health” group of experts to **improve understanding** of how diseases with the potential to trigger **pandemics** emerge and spread. This group will focus on the development of a **long-term global plan of action to avert outbreaks of disease**. [FAO](#), 2 pages. (20.05.2021). **Streptococcus suis** is a **pig** pathogen; however, since 1998, it has caused **three large outbreaks in people** in China, and a **sharp increase in infections** globally. A genomic analysis has made it possible to determine where and when the bacterium jumped from pigs to humans. [Nature](#), 1 page. (07.07.2021). Original publication: [EMBOMolMed](#). In **Denmark**, the new official **dietary guidelines** have been developed with **environmental impact** in mind for the first time. [FoodNavigator](#). 2 pages (15.07.2021).

★★ **Vibrio spp.:** The European Centre for Disease Prevention and Control (ECDC) has developed a **model** for **mapping** the environmental conditions that favour the **development of Vibrio spp.** in the Baltic Sea. [ECDCVibrioMap](#). (02.07.2021).

★★ **Crohn's disease:** The German Federal Institute for Risk Assessment (BfR) and the Max Rubner-Institut (MRI) have conducted an in-depth examination of the literature and concluded that there are **still no valid scientific results proving a link between Mycobacterium avium** subsp. *paratuberculosis*, the agent responsible for bovine paratuberculosis, and **Crohn's disease** in humans. [BfR](#), 3 pages. (15.07.2021).

★★ **Cyclospora:** In the USA, the Centers for Disease Control and Prevention (CDC) have announced that the number of cases of **domestically acquired cyclosporiasis** has **increased** by 254 cases since 14 July 2021. 462 cases have been confirmed and **41 people have been hospitalised**; no deaths have been reported. [CDC](#), 2 pages. (29.07.2021).

★ **Ostrich meat:** A study has focused on the **presence of antibodies against Toxoplasma gondii** in farm-reared ostriches from the Czech Republic. **36%** of ostriches tested **positive**; this high rate of seropositivity may indicate a **risk of T. gondii infection by eating ostrich meat**. [IntJFoodMicro](#), 14 pages. (28.07.2021).

★ **Genome editing:** A team of German and Canadian researchers has investigated how people in five different countries **react** to various usages of **genome editing in agriculture**. The researchers looked at which uses are accepted and how the **risks** and **benefits** of the new breeding technologies are rated by people. [EurekAlert!](#). (12.07.2021). Original publication: [AgrAndHumVal](#). In the **United Kingdom**, a study on **consumer perception** of genome editing has been published by the food safety authority. [FSA](#), 55 pages (07.2021).

★ **Agriculture:** US researchers have developed a **gel-like coating** around **seeds** to protect them from the **stress of water shortage** during their germination phase while providing them with nutrients. [ScienceDaily](#), 1 page. (08.07.2021). Original publication: [NatureFoods](#).

★ **Bacillus cereus:** Researchers have established that **chronic exposure to cereulide**, the heat-stable and acid-resistant emetic toxin which is produced by some *B. cereus* strains, causes **intestinal inflammation** and **gut microbiota dysbiosis** in mice. [EnvPollution](#), 13 pages. (16.07.2021).

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

Disclaimer: The presentation of articles reflects their media presence. The FSVO assumes no responsibility for the validity of the information obtained from the scanned media channels. The expressed views are not to be taken as an official opinion of the FSVO.



Seismo Info 07/2021



Source: mvcaspel, Fotolia

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

[FSVO website](#)

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



Survey: In June, we asked for your help in completing our survey on the early detection for food safety. That survey has now drawn to a close – thank you for taking part! We are currently reviewing your answers and will provide a breakdown of the results in the near future.

Food trends



Upcycling/recycling: When **herring** are filleted, more than half their weight becomes a low-value “side stream” that never reaches our plates – despite being rich in protein and healthy omega-3 fatty acids. Now, Swedish scientists have developed a technique, which can significantly extend the side streams' shelf life **and increase the opportunities to use them as food**. [EurekAlert!](#), 2 pages. (10.06.2021). Original publication: [FoodControl](#). British researchers have succeeded in using a new technique that **transforms plastic waste into vanillin**; this will help to produce more vanillin while also reducing plastic pollution. [Archyde](#), 2 pages. (22.06.2021). Original publication: [GreenChem](#). A British **spring water** company has launched a range of products in **aluminium bottles** made using **100% recycled aluminium**. [FoodNavigator](#), 3 pages. (11.06.2021).

★★★ **Nitrates:** The World Health Organisation (WHO) has announced that **nitrites and nitrates**, which are used to give sausages their distinctive pink colour, are **carcinogens**. In the meantime, an industry has begun to emerge for products that are free from preservatives. [Linkiesta](#), 3 pages. (11.06.2021).

★★ **Lab-grown meat:** From lab-grown turkey to cultured bull and lamb, the **cell-based meat category is expanding fast**, a recent article reports. [FoodNavigator](#), 4 pages. (07.06.2021). A new report evaluating the future of the industry around cultured meat has been published. The report indicates that, while the sector is **expanding rapidly**, there are certain **obstacles**. [QAMag](#), 2 pages (17.06.2021). Original publication: [IDTechEx](#).

★★ **Vegan cheese substitute:** A study on **consumer acceptance** of animal free “dairy” products has revealed that 71% of those asked would be willing to purchase **animal-free “cheese”**, while 79% would be willing to try it. [EurekAlert!](#), 2 pages. (24.06.2021). Original publication: [FrontSustainFoodSyst](#).

★ **Food supplements:** Consumers have **purchased more functional foods**, beverages, and supplements since the beginning of the COVID-19 **pandemic**. [FoodIndustryExecutive](#), 1 page. (23.06.2021).

Unusual outbreaks

★★★ **Salmonella Weltevreden:** The US Food and Drug Administration (FDA), America’s authority for food safety, has determined that **cooked shrimp** is the likely source of an outbreak of *Salmonella* Weltevreden in two states. [FoodSafetyNews](#), 2 pages. (16.06.2021). Original publication: [FDA](#).

★★★ **Airborne contamination:** The FDA has explained how airborne contamination can contribute to the **spreading of pathogenic agents from agriculture and animals to orchards**, based on a number of instances in which peaches were found to be contaminated with salmonella in 2020. [TheCounter](#), 4 pages. (15.06.2021). Original publication: [FDA](#).

★★ **Listeria monocytogenes:** A **nosocomial outbreak** of listeriosis, caused by a ST451 strain of *L.monocytogenes*, has been linked to a hospital kitchen. This is the first recorded instance of an outbreak of listeriosis caused by **ST451** in Italy. [Pathogens](#), 12 pages. (12.05.2021). In the United States, a recall of **cherry juice** is currently underway over concerns of a potential contamination with *L. monocytogenes*. [FoodSafetyNews](#), 2 pages. (14.06.2021).

★★ **Salmonella enteritidis:** In recent months, more than **three hundred cases of salmonellosis** have occurred in various European countries and Canada, which are linked to each other. In the UK, the cases could be partly traced back to **frozen breaded poultry meat**. [EurekAlert!](#), 2 pages. (01.06.2021).

★★ **Salmonella Urbana:** In the United States, results from whole genome sequencing (**WGS**) have pinpointed **cashew nuts** as the root cause of an outbreak of *Salmonella* Urbana stemming from cashew brie that was contaminated with the bacteria. [CDC](#), 2 pages. (07.05.2021).

Food safety

★★★ **Campylobacter:** In Denmark, a survey based on the data from the surveillance of *Campylobacter* has demonstrated that integrated whole genome sequencing (**WGS**)-based surveillance of *Campylobacter* can identify **correlations** between the occurrence of **specific strains in chicken meat and in human infections**. [Eurosurveillance](#), 9 pages. (08.06.2021). In the UK, nine major retailers have revealed the amount of **poultry contaminated by Campylobacter** in their supply chains so far this year. The latest figures show that on average, around **1.6% of chickens tested positive** for the highest level of contamination – an improvement from the end of last year. [DailyPost](#), 2 pages (11.06.2021).

★★★ **Risk Assessment:** The World Health Organization (**WHO**) has developed a **handbook** for countries to measure their **burden of foodborne disease**. The guide will help nations to identify food safety system needs and

data gaps so they can strengthen national infrastructure. [FoodSafetyMagazine](#), 1 page. (09.06.2021). Original publication: [WHO](#). In Norway, a microbiological risk assessment has been conducted in order to establish a **scientific basis** for implementing **risk-based surveillance and monitoring programmes**. *Toxoplasma gondii* is at the top of the list, followed by *Campylobacter*, *Echinococcus multilocularis*, enterohaemorrhagic *E. coli* (EHEC), *Listeria monocytogenes* and non-typhoidal *Salmonella*. [FoodSafetyNews](#), 2 pages. (23.06.2021). Original publication: [VKM](#).

★★★ **Hypoglycin A:** A German study has found that **cows can pass on the hypoglycin A toxin** through their **milk**, after small quantities of the toxin were detected in non-pasteurised milk collected from cows that had grazed in a pasture exposed to a maple tree. Hypoglycin A can provoke **severe reactions** in humans and animals. [EurekAlert!](#), 2 pages. (07.06.2021). Original publication: [Toxins](#).

★★★ **Group B Streptococcus (GBS):** The Food and Agriculture Organization of the United Nations (FAO) has **warned about** illnesses linked to the **consumption of raw freshwater fish** in South-East Asia. According to experts, *S. agalactiae*, a group B Streptococcus (GBS) had been detected in several countries in the region. [FAO](#), 78 pages. (24.06.2021). More information: [Briefing letter Streptococcus agalactiae](#), [ADURA](#).

★★★ **Mercury:** It has been reported that **global warming** and the **intensification of land use** will cause an **increase in the mercury content in fish**. [ScienceDaily](#), 2 pages. (22.06.2021). Original publication: [ScTotEnv](#).

★★★ **Nanoparticles:** American researchers have used **machine learning** to **evaluate the properties of metallic nanoparticles** that make them more likely to be absorbed by plant life. The algorithm could indicate how much **plants** accumulate nanoparticles in their roots and shoots. [ScienceDaily](#), 2 pages. (16.06.2021). Original publication: [EnvSciAndTechn](#).

★★ **Infectious diseases and Covid-19: COVID-19 prevention measures** have brought a significant **recess** of once-common **infectious diseases**. However, a **resurgence** of these infectious diseases has been observed now that lockdown measures have begun to ease in some parts of the world. [IFLScience](#), 2 pages. (14.06.2021). In the US, public health officials are urging the public and foodservice workers to **take precautions** against **Norovirus**; this comes after a **rise in the number of infections** was observed over the last few weeks following the easing of covid-based restrictions. [FoodSafetyNews](#), 2 pages. (15.06.2021).

★★ **Antibiotic resistance:** Chinese researchers have detected the **optrA gene** in strains of *Campylobacter jejuni* in samples collected from **retail meat**. The optrA gene encodes a protein that confers **resistance to oxazolidinones and phenicols**. [IntJFoodMicrobioloy](#), 24 pages. (29.06.2021).

★★ **Shigatoxin-producing E.coli (STEC):** Researchers in Germany have found a **wide distribution** and **high diversity** of Shiga toxin-producing *E. coli* (STEC) in **flour**. [FoodSafetyNews](#), 3 pages. (30.06.2021). Original publication: [IntJFoodMicrobioloy](#). More information: [ADURA](#).

★★ **Hepatitis E:** An analysis of the Hepatitis E virus (HEV) **in the One Health context** in Croatia has been published. The study's authors conclude that continued periodical **surveys** in humans and animals are **needed** to identify the possible changes in the epidemiology of HEV infections. [Pathogens](#), 11 pages. (04.06.2021). Dutch researchers have compared Hepatitis E Virus **isolate sequences** from **pigs** with those from **blood donors and patients**; there was no difference observed between the human and the pig isolates, which suggests that **HEVs in humans are very likely to originate from pigs**. [Viruses](#), 10 pages. (29.06.2021).

★★ **Giardia:** The French Agency for Food, Environmental and Occupational Health & Safety (ANSES) has updated a **data sheet on foodborne biological hazards** concerning *Giardia duodenalis*. [ANSES](#), 6 pages. (26.05.2021). A recently published study has classified a **small endosymbiotic dsRNA virus**, *G. lamblia virus* (GLV), which might inhabit human and animal isolates of *G. duodenalis* and may potentially have an **impact on virulence**. [Biomedicines](#), 29 pages. (08.06.2021).

★★ **Vibrio vulnificus:** Florida state health officials have reported **ten cases of Vibrio vulnificus infections**, including four deaths. The bacterium can cause illness in individuals with a weakened immune system once ingested within contaminated **seafood**. [OutbreakNewsToday](#), 1 page. (18.06.2021). More information: [ADURA](#).

★★ **Macadamia nuts:** Researchers have studied the **microbial load** and prevalence of *Escherichia coli* and *Salmonella* spp. in Macadamia nut production systems. [JFoodProt](#), 8 pages. (06.2021).

★★★ **Protozoa:** Researchers have used a **novel sequencing test** designed for the **simultaneous** detection of *Cryptosporidium* spp., *Giardia* spp. and *Toxoplasma gondii* in **shellfish**, and shown that protozoan contamination was **not associated** with contamination rates and **faecal indicators**. This indicates that using faecal indicators for ensuring food safety may be **insufficient**. [IntJFoodMicr](#), 24 pages. (21.06.2021). A company in Canada is recalling its **fresh blueberries** because test results have shown **contamination** with the **Cyclospora** parasite. [FoodSafetyNews](#), 1 page. (26.06.2021). More information: [FDA](#). In Germany, researchers have investigated incidences for various toxoplasmosis manifestations using data from the country for 2011–2016 They concluded that **toxoplasmosis** constitutes a **substantial disease burden** in Germany and are recommending the implementation of toxoplasmosis-specific **prevention programmes**. [EmlnDis](#), 6 pages (08.2021).

Food fraud

★★★★ **Tuna:** Belgian authorities seized more than **80 tonnes of tuna** in 2020, the majority of which originated from Asia. The aim of the operation was to identify the use and frequency of fraud in order to **cover up modifications** to the fish to make it appear more fresh. [RTBE](#), 2 pages. (02.06.2021). Original publication: [AFSCA](#). At least twelve people **have fallen ill in Italy**. The outbreak is suspected to have been caused by **thawed yellowfin tuna steaks**. Six lots have been recalled; the recall notice indicates the presence of **nitrites or nitrates** in the fish. The use of nitrites as food additives to alter the colour of fish products is not authorized in Europe. [FoodSafetyNews](#), 2 pages. (12.06.2021). In the US, it was revealed that **tuna sandwiches** sold by a large sandwich-making chain contained **no trace of tuna DNA**. [FoxBusiness](#), 2 pages (23.06.2021).

★★★★ **Pesticides:** Italian authorities have seized **tomato concentrate** after they found that the product contained **unacceptably high levels of pesticide**. Several hundred tonnes are thought to have already been sold to countries inside and outside of the European Union. [ANSA](#), 1 page. (08.06.2021). According to Europol, the European law enforcement agency, a total of **1,203 tonnes of illegal pesticides** were removed from circulation between January and April 2021. It appears that **online sales** have contributed significantly to this increase. [Euraktiv](#), 2 pages. (23.06.2021). Original publication: [Europol](#).

★★★ **Coconut flower sugar:** A German magazine has carried out an investigation into coconut flower sugar. Each of the products examined **listed coconut flower sugar as its only ingredient** on the packaging. **Foreign sugar**, likely cane sugar, was found in quantities reaching as high as 50% in **eight out of 20 products**. Trace amounts of **gluten** were also found in eight of the products. BeoWarnBVL, (06.2021). Original publication: [ÖkoTest](#).

★★★ **Pomegranate:** Due to growing consumer interest in the **benefits of pomegranate** over the past two decades, less morally inclined producers and suppliers have turned to employing various **counterfeiting** methods. [BotAdulterantsPrevBull](#), 9 pages. (06.2021).

★★★ **Mung beans: Illegal production of mung bean sprouts** has been discovered in the Czech Republic. The sprouts were grown and produced in **unsatisfactory hygiene conditions** and in an **unauthorized location**. 120 kg of product will be destroyed. [FoodSafetyNews](#), 3 pages. (28.06.2021).

Close up

★★★★ **Plastics:** Scientists say that they have **produced a plastic**, made from **genetically modified *E. coli***, that can be converted into film or bendable three-dimensional moulds. The plastic substitute almost completely **dissolves** in 45 days. [GLP](#), 1 page. (01.06.2021).

★★★★ **Neocotinoids:** The Scottish government appears ready to approve the use of imidacloprid to treat **caged salmon** against **sea lice**. **Just one milligram** of the insecticide, which has been blamed for destroying bee populations, can **damage aquatic life**. [TheGuardian](#), 5 pages. (27.05.2021).

★★★★ **Emerging risks and the Green Deal:** The **report on the EREN/StaDG-ER joint event**, the "European Green Deal: opportunities to anticipate and address emerging risks" has now been published. The event was held as part of the European Union's dialogue for the United Nations **Foods Systems Summit 2021**. [SummitDialogues](#), 13 pages. (11.06.2021).

★★★ **Antibiotic resistance:** The European Food Safety Authority (EFSA) has published a **report** examining the **role played by the environment** in the **emergence** and **spread** of antimicrobial resistance (AMR) through the food chain. [EFSA](#), 188 pages. (15.06.2021).

★★ **Whole genome sequencing (WGS):** Whole genome sequencing (WGS) provides a **level of additional information** that more than **balances out** the **additional costs** if used effectively, according to a recent study. [Food-SafetyNews](#), 3 pages. (08.06.2021).

★★ **Per- and polyfluoroalkyl substances (PFAS):** According to a study published by the German Federal Institute for Risk Assessment (BfR), certain populations are **exceeding** the **guideline values** for levels of per- and polyfluoroalkyl substances (PFAS). [BfR](#), 75 pages. (28.06.2021).

★★ **Natural bactericide:** A natural bacteria-killing compound has been discovered in a type of **raw, fermented pork sausage**. Toxic to bacteria but safe for humans, **Plantacyclin B21AG** is believed to be a natural alternative to artificial food preservatives. [EurekAlert!](#), 2 pages. (07.06.2021). Original publication: [ProcessBiochemistry](#).

★★ **Microbiome:** A Swedish study has examined the connection between **food choices** and the composition of the **human intestinal microbiome**. The study highlighted the notable impact of dietary fibre and red meat on the health of the gut microbiome. [FoodNavigator](#), 2 pages. (04.06.2021). Original publication: [AmJCliNutr](#).

★★ **Microalgae:** Among the 5,000 microalgae species globally, **only 250** are **potentially harmful**. Current identification methods can take up to a few days; now, a researcher is developing a faster method, based on **DNA metabarcoding** that can **deliver results within a day**. This technology functions in a similar way to product bar-codes. [TheStraitsTimes](#), 3 pages. (14.06.2021).

★★ **Water:** A study has been conducted to evaluate the feasibility of a **combined UV/chlorine treatment** process to **disinfect** drinking water, using *Pseudomonas aeruginosa* as the target microorganism. The study suggests that the UV/chlorine treatment can completely damage bacteria and is **promising for pathogen inactivation** to overcome the limitations of UV and chlorine treatments alone. [EnvScAndTech](#), 10 pages (17.06.2021).

★★ **Salmonella:** The US Centers for Disease Control and Prevention (CDC) and public health officials in several states are investigating outbreaks of **Salmonella** infections linked to contact with **backyard poultry**. A total of **474 sick people** have been reported across 46 states. [HSToday](#), 2 pages. (29.06.2021). Original publication: [CDC](#).

★★ **Nutrition:** An American study has revealed that **diets rich in sugar and fat** lead to **imbalances in the gut's microbial culture** and contribute to inflammatory skin diseases such as **psoriasis**. [ScienceDaily](#), 2 pages. (22.06.2021). Original publication: [JInvestDerm](#). A study has shown that **artificial sweeteners** (saccharine, sucralose and aspartame) can cause illness in previously healthy intestinal bacteria (*E. coli* and *E. faecalis*) and result in **serious health issues**. [IntJMolSc](#), 14 pages. (15.05.2021).

★ **Omega 3:** Among the Omega-3 fatty acids, **DHA**, or docosahexaenoic acid is crucial to brain function, vision and the regulation of inflammatory phenomena. DHA is also associated with a **reduction in the incidence of cancer**. Researchers have just **elucidated the biochemical mechanism** that allows DHA and other related fatty acids to slow the development of tumours. [EurekAlert!](#), 2 pages. (11.06.2021). Original publication: [CellMetabolism](#).

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

Disclaimer: The presentation of articles reflects their media presence. The FSVO assumes no responsibility for the validity of the information obtained from the various media channels. The expressed views are not to be taken as an official opinion of the FSVO.



Seismo Info 06/2021



Source: mvcaspel, Fotolia

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

[FSVO website](#)

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

★★★★ **Survey:** What are your views on the early detection of food safety? Your opinion matters to us: take part in our survey (in French) [here](#). Time required: 10 to 15 minutes. Your data will be treated confidentially. Thank you!

Food trends

★★★★ **“High meat”:** “High meat” refers to a new trend of eating **raw meat that has been stored untreated** for months on end. People report feelings of euphoria after eating it. [Vice](#), 3 pages. (04.05.2021). The trend is being promoted via **social media**. [Insider](#), 1 page (06.05.2021). However, doctors have cautioned against the practice as it can cause **serious illnesses**. [ScienceTimes](#), 2 pages (06.05.2021).

★★★★ **Meat substitutes:** The Federal Office for Agriculture (**FOAG**) has published a first report analysing the **market for meat substitutes** in the Swiss retail sector from various perspectives. [FOAG](#), 35 pages (17.05.2021).

★★ **Upcycling:** Japanese researchers have developed a method for turning **food waste** such as **fruit and vegetable scraps** into materials with a bending strength similar to that of concrete, while still remaining **edible**. [EurekaAlert!](#), 2 pages (25.05.2021). More information: [UniversityOfTokyo](#).

★★ **Pasta:** Researchers have invented packaged pasta in the form of **dried flat sheets** that **take on a variety of 3D shapes** when they are added to boiling water. This process reduces packaging waste and storage space, and shrinks the carbon footprint of transportation. [Anthropocène](#), 3 pages (21.05.2021).

★★ **Straws:** Drinking straws are one of the single-use plastic products that will be **banned from sale** across Europe from 3 July 2021. The German Federal Institute for Risk Assessment (BfR) has considered **possible alternatives**. [BfR](#), 3 pages (27.05.2021). More information: [BfR](#).

Unusual outbreaks

★★★ **Salmonella Braenderup:** Melons have been linked to a *Salmonella Braenderup* outbreak that has affected 200 people in more than ten countries, including Switzerland. [FoodSafetyNews](#), 2 pages. (01.06.2021).

★★★ **Hepatitis E:** In Switzerland, there has been a **sharp increase** in the number of hepatitis E cases in the early months of 2021. It is thought that infected **pork** may be to blame. The Federal Office of Public Health (FOPH) is investigating. [NZZAmSonntag](#), 2 pages (29.05.2021).

★★★ **Escherichia coli 0157:** In the United States, fresh **organic produce** is a possible source for an outbreak of *Escherichia coli* O157 that has affected **seven children**, all younger than 15 years of age. [FoodSafetyNews](#), 2 pages. (11.05.2021). Original publication: [KingCounty](#).

★★★ **Salmonella Newport:** The U.S. Food and Drug Administration (FDA) has released a **report on its investigation** into the *Salmonella Newport* outbreak that caused more than **1,600 illnesses** in the United States and Canada between June and October 2020 (Seismo Info 08/2020, 09/2020 and 10/2020). **Irrigation water** has been identified as the **likely source**. [FoodSafetyNews](#), 2 pages. (13.05.2021). Original publication: [FDA](#).

★★ **Escherichia coli:** Health officials in the United States have linked an *E. coli* outbreak to a brand of **yoghurt**. **Eleven confirmed cases**, including six children under the age of ten, have been affected; seven people have been hospitalised and three have developed **haemolytic uraemic syndrome**. [OregonLive](#), 1 page. (15.05.2021). Original publication: [DOH](#). A study into a **deadly outbreak** of *E. coli* in the United Kingdom linked to **raw pet food** has provided further evidence that these products are a risk factor for human infection. [FoodSafetyNews](#), 1 page. (28.05.2021). Original publication: [Epidemiology&Infection](#).

Food safety

★★★ **Survey:** A **survey** on interest in **food safety** and risk perception in Switzerland was conducted on behalf of the Federal Food Safety and Veterinary Office (**FSVO**). The report on the survey is available on the FSVO website. [FSVO](#), 59 pages. (06.05.2021). Summary, 5 pages: [FSVO](#).

★★★ **SARS-CoV-2:** An **overview** of SARS-CoV-2 along the **food chain** is described in detail in a new document published by the Federal Food Safety and Veterinary Office (**FSVO**). [FSVO](#), 3 pages. (12.05.2021).

★★★ **Drinking water:** Researchers at the Swiss Federal Laboratories for Materials Science and Technology (**Empa**) and the Swiss Federal Institute of Aquatic Science and Technology (**Eawag**) are developing **new materials and processes to free water from pathogenic microorganisms** such as **rotaviruses**. [WaterWorld](#), 2 pages. (05.05.2021). More information: [Empa](#).

★★★ **Clinostomum complanatum:** The **parasite** *Clinostomum complanatum* has been found in **perch in the river Doubs**, on the border between France and Switzerland. Although not deadly to the fish, if the parasite is transmitted to humans who eat **sushi**, for example, it attaches to the throat and can only be removed by means of **surgery**. [FranceBleu](#). (28.04.2021), 1 page. [LeMatin](#), 2 pages (07.05.2021).

★★★ **Organic meat:** A new American study has found that meat that is **certified organic** is **less likely** to be contaminated with **pathogenic bacteria** and **multidrug-resistant** organisms than conventionally produced meat. [ScienceDaily](#), 2 pages. (12.05.2021). Original publication: [EHP](#).

★★★ **Cryptosporidium:** Finnish health authorities have noted an **increase** in Cryptosporidium **infections**. Despite the coronavirus pandemic restrictions, there were **571** cryptosporidiosis **cases** in 2020, which is almost **30 times higher** than the figure for 2010. [FoodSafetyNews](#), 2 pages. (25.05.2021).

★★★ **Toxoplasma gondii:** American research scientists have analysed **fresh vegetables** for the presence of *Toxoplasma gondii* **oocysts**. **18% of samples were found to be positive** for both organic and conventional produce. [FoodMicrobiology](#), 4 pages. (13.05.2021).

★★ **Brevetoxins:** The French Agency for Food, Environmental and Occupational Health and Safety (ANSES) has set a **guideline value** for brevetoxins, a group of **emerging marine toxins**, in order to protect consumers of produce such as oysters and mussels. [FoodSafetyNews](#), 2 pages. (12.05.2021). Original publication: [ANSES](#).

★★ **Salmonella:** After receiving notification from its supplier in Spain, an American company is recalling certain **boxes of flour** because of **possible salmonella contamination**. [FoodSafetyNews](#), 1 page. (28.05.2021).

★★ **Titanium dioxide:** Following an **updated safety assessment** of the food additive titanium dioxide (E171) by the European Food Safety Authority ([EFSA](#)), the German Federal Institute for Risk Assessment (BfR) has published both its **opinion** on the issue and a list of **FAQs**. [BfR](#), 3 pages. (06.05.2021).

★★ **Drinking water: Micropollutants** such as **steroid hormones** are contaminating drinking water all over the world. Scientists have developed a new chemical process for removing the hormones, based on photocatalytic mechanisms that **convert the pollutants** into **potentially safe** oxidation products. [AppliedCatalysis](#), 13 pages. (05.03.2021).

★★ **Clostridium botulinum:** A **mathematical model** for assessing **growth** and **toxin production** by *Clostridium botulinum* – the most comprehensive model of its kind – has been developed by Danish researchers. [EurekAlert!](#), 2 pages. (27.03.2021). Original publication: [IntJFoodMicrobiology](#).

Food fraud

★★★ **Kefir:** A study by American researchers has found that **66% of products** marketed under the name “kefir” in the United States overstate the microorganism density of the contents and that 80% contain bacterial species that are not included on the label, **thereby misleading consumers**. [EurekAlert!](#), 1 page. (12.05.2021).

★★ **Saffron:** Europol supported the Spanish authorities in targeting an organised crime group laundering millions of euros of illegal profits from the trafficking of substandard saffron. The criminal network **mixed real saffron with herbs and chemicals** before exporting it. [Europol](#), 1 page. (07.05.2021).

★★ **Avocado:** In South Africa, **organised crime** has found a new and lucrative line of business, namely trading in “green gold”, as the avocado is known. [SchweizerBauer](#), 3 pages. (19.05.2021).

★★ **Honey:** Falsely labelled, mixed with syrup or “laundered”, honey is the **third most adulterated food** in the world after milk and olive oil. [TimesLive](#), 3 pages. (21.05.2021).

★ **Vegan food:** Certain organisations are developing technologies based on **next generation sequencing** (NGS) in order to identify **animal-derived materials** and to detect potential **cross-contamination** in vegan products. [FoodNavigator](#), 2 pages. (26.05.2021).

Close up

★★★ **Plant protection products:** The Federal Food Safety and Veterinary Office (FSVO) has published the **2020 report** on the **monitoring** of plant protection products in **foodstuffs**. [FSVO](#), 31 pages. (31.05.2021).

★★★ **Nutrition:** Swiss researchers have developed a **tool** that uses an extensive database of food items, nutrients and environmental impacts to **develop optimised diets** specific to an individual in a given country and month. [EurekAlert!](#), 1 page. (05.05.2021).

★★★ **Recreational water:** There are fears of a **chlorine shortage** in the United States, which is a matter of concern for the country's swimming pool owners. The shortage stems largely from an incident at a factory belonging to a major supplier, but the high demand for chlorine in 2020, when Americans spent more time at home with their pools due to the pandemic, is also a contributory factor. [USAToday](#), 2 pages. (02.05.2021). The Centers for Disease Control and Prevention (CDC) in the United States have published an **analysis of outbreaks associated with recreational water** between 2015 and 2019. A total of 208 outbreaks were reported to the CDC, with *Cryptosporidium* causing 76 outbreaks, resulting in 2,492 cases. *Legionella* caused 65 outbreaks, resulting in 13 deaths. [CDC](#), 1 page. (21.05.2021).

★★★ **Norovirus:** As the United States reopens after months of lockdown, a **resurgence of norovirus infections** is being observed. [IdahoStatesman](#), 1 page. (05.05.2021).

★★★ **Salmonella and antibiotic resistance:** In a new study published by the Centers for Disease Control and Prevention (CDC) in the United States, researchers have estimated a **40% increase** in the annual incidence of *Salmonella* infections with displaying a clinically important **resistance to antibiotics**. [FoodSafetyNews](#), 3 pages. (20.05.2021). Original publication: [CDCEmergingInfectiousDiseases](#).

★★ **Hepatitis E:** Researchers have studied the **risk factors** for autochthonous hepatitis E virus (HEV) infections in the blood donor population in England. The findings **confirm** previous **links to pork products** and suggest that appropriate animal husbandry is essential to reduce the risk for HEV infection. [CDCEmergingInfectiousDiseases](#), 10 pages. (06.2021).

★★ **Sugar-sweetened drinks:** A new study has found a **link** between the **consumption of sugar-sweetened drinks** and an **increased risk of colorectal cancer** in women under the age of 50. [ScienceDaily](#), 2 pages. (06.05.2021).

★★ **Fish oil:** According to a new study, the **benefits** of taking a fish oil supplement **depend on your genetic potential**. [MedicalExpress](#), 2 pages. (25.03.2021). Original publication: [PLOSGenetics](#).

★★ **Sardines:** A study suggests that **older people** with **prediabetes** who followed a diet rich in sardines for one year show a **significant reduction** in the risk of developing type 2 diabetes compared with those who have followed a healthy diet without the sardines. [Medscape](#), 3 pages. (20.05.2021).

★★ **Artificial colourants:** American researchers have found that artificial food colourants may **cause disease** when the **immune system** is dysregulated. [EurekAlert!](#), 1 page. (13.05.2021).

★★ **Vegetarian diet:** According to a new study in over 166,000 adults in the UK, vegetarians appear to have a **healthier biomarker profile** than meat-eaters, and this applies to adults of any age and weight, and is also unaffected by smoking and alcohol consumption. [ScienceDaily](#), 1 page. (09.05.2021). A study comparing the **effects of strength training** in volunteers with a vegan or omnivorous diet has found that the **right level of protein intake** is more important than the source of the protein if the goal is to gain muscle strength and mass. [EurekAlert!](#), 3 pages. (19.05.2021). Original publication: [SportsMedicine](#).

★★ **Campylobacter:** According to a new study, *Campylobacter* infection can also be **transmitted by sexual contact**. [EmergingInfectiousDiseases](#), 8 pages. (04.2021).

★★ **Packaging:** Researchers have evaluated **chitosan-metal oxide films** and chitosan-modified graphene (oxide) films for their **antibacterial activity** against *Campylobacter jejuni* and *Listeria monocytogenes*. Their conclusion was that these types of film may be considered safe and non-cytotoxic. [IntJMolecularSciences](#), 19 pages. (29.05.2021).

★ **Rapid detection method:** Researchers have evaluated the “loop-mediated isothermal AMPLification” (LAMP) **col-orimetric method** for detecting *Salmonella* and *Campylobacter* in **poultry meat**. They concluded that the method is a valid alternative when **one-day results** are needed, thereby improving the rapid identification of positive meat batches, even in the absence of specialised instrumentation. [Foods](#), 12 pages. (19.05.2021).

★ **Milk:** There is **no link** between **milk** and **increased cholesterol**, according to a new study of two million people. [ScienceDaily](#), 2 pages. (24.05.2021). Original publication: [IntJOfObesity](#).

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

Disclaimer: The presentation of articles reflects their media presence. The FSVO assumes no responsibility for the validity of the information obtained from the various media channels. The expressed views are not to be taken as an official opinion of the FSVO.



Seismo Info 05/2021



Source: mvcaspe, Fotolia

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

[FSVO website](#)

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

Food trends

★★★★ **Packaging:** The German Federal Institute for Risk Assessment (BfR) has published an “FAQ” on **packing wrap made from beeswax**, an environmentally friendly alternative material for packaging food. Certain aspects of **food safety** need to be taken into consideration when using beeswax packaging. [BfR](#), 2 pages. (06.04.2021). An international group of scientists has created **edible food films** for packaging fruits, vegetables, poultry, meat and seafood. [NewFoodMagazine](#), 2 pages. (23.03.2021). Original publication: [JournalFoodEngineering](#). Researchers have developed a **bioplastic** made of **waste wood powder** that could be an alternative to current plastics. [Anthropocene](#), 2 pages. (01.04.2021). Original publication: [NatureSustainability](#).

★★★★ **Food Trends:** In France, the health monitoring platform for the food chain (SCA) has published an article on **new consumption habits**, tools for monitoring the **evolution** of food purchasing and the issues at play in terms of **monitoring** biological and chemical hazards. [PlateformeSCA](#), 4 pages. (04.03.2021).

★★★★ **Selenium fortification:** German researchers have developed a method for growing 'Elstar' apples that contain **more than ten times the usual amount of selenium**. [BundesZentrumFürErnährung](#), 1 page. (2021).

★★★ **Food preservation:** Researchers at the Danish National Food Institute have generated a **natural lactic acid bacterium** which secretes the antimicrobial peptide **nisin**, a natural food preservative. [EurekAlert!](#), 1 page. (27.04.2021). Original publication: [JAgriculturalFoodChemistry](#). A **sticker** has been developed that could **extend the shelf life of fruits** by an additional **14 days**. The sticker uses natural ingredients to create a protective layer that covers the surface of the fruit and **slows the ripening process**. [WEF](#), 1 page. (25.03.2021).

★★ **Processed food:** A new study argues that “it is over simplistic to assume that processed food equals unhealthy”. [FoodNavigator](#), 3 pages. (30.03.2021). Original publication: [TrendsInFoodScienceAndTechnology](#).

★★ **Multi-functional food additive:** A recent study aimed to determine the **production of folate, short chain fatty acids** and **antimicrobial activity** exhibited by *Lactobacillus plantarum* **G72** for a potential dietary application in **pregnant women**. The results of the study suggest that *L. plantarum* G72 could be used as a multifunctional food additive. [MicrobiologyAndBiotechnologyLetters](#), 6 pages. (2021).

★★ **Plant-based meat substitutes:** The market for meat and dairy alternatives is growing. An article takes an in-depth look at **food safety of plant-based foods**. [FoodNavigator](#), 3 pages. (21.04.2021). A U.S.-based start-up claiming to make **real honey without bees** is gearing up to begin supplying its vegan honey to food service companies. [FoodNavigator](#), 2 pages. (30.03.2021).

★★ **Cell-based seafood:** Cell-based, lab-grown seafood is **an emerging foodstuff** that could provide a solution to overfishing. [Anthropocene](#), 3 pages. (02.04.2021). Original publication: [FishAndFisheries](#). A British company has developed the **world’s first laboratory-grown caviar**. [FoodNavigator](#), 3 pages. (28.04.2021).

★★ **Insects:** The Food and Agriculture Organization (FAO) of the United Nations has published a document looking at **edible insects** from a **food safety** perspective. [FAO](#), 108 pages. (2021).

★★ **Upcycling:** Upcycling is an approach that involves **using ingredients** that would not otherwise be intended for human consumption (see Seismo Info 04.2021). This topic is discussed in a recent article. [Forbes](#), 5 pages. (30.03.2021). Certain **chocolatiers and confectioners**, including a Swiss brand, are incorporating upcycled cocoa fruit into their products. [FoodNavigator](#), 3 pages (27.04.2021). In the United States, researchers are exploring the up-cycling of **chardonnay wine-grape pomace** as a source for food supplements and other food-based products. [ScienceDaily](#), 2 pages (22.04.2021). The Norwegian Institute of food fisheries and aquaculture research (Nofima) is developing enzymatic processes to extract **protein-based substances from fish offcuts** with a view to upcycling them for human consumption. [FoodNavigator](#), 3 pages (26.04.2021). A **certification mark** has been developed for up-cycled ingredients in food and beverages. [FoodNavigator](#), 3 pages. (22.04.2021). A UK-based company is working on a project to convert unwanted **potatoes** into “clean-label functional protein” for use in **meat analogues**. [FoodNavigator](#), 2 pages. (03.05.2021).

★★ **Eggs:** Russian researchers have developed a technology that **disinfects the surface of packaged eggs**, which helps to kill bacteria, including salmonella, on eggshells. The packaged eggs are disinfected for 50 nanoseconds using an **electron beam**. [EurekAlert!](#), 2 pages. (02.04.2021). Original publication: [FoodAndBioproductsProcessing](#).

★ **Food colouring:** An international team of researchers has discovered a **natural brilliant blue food colouring**. The new cyan blue, **obtained from red cabbage**, could be used as an alternative to artificial blue food colourings. [EurekAlert!](#), 2 pages. (07.04.2021). Original publication: [AppliedSciencesAndEngineering](#).

★ **Social media:** A survey has been carried out among **young adults** with the aim of gaining a better understanding of the **impact of social media** on their **eating habits** and **nutrition**. [ErnährungImFokus](#), 6 pages. (01.2021).

Unusual outbreaks

★★★ **Salmonellae:** In Denmark, an **outbreak** of *Salmonella* Typhimurium affecting **25 people** has been traced to a brand of **herbal supplements**. [FoodSafetyNews](#), 2 pages. (12.04.2021). An update from the Danish authorities reveals that the outbreak is **continuing to affect more people** and has been linked to **three deaths**. [FoodSafetyNews](#), 1 page (19.04.2021). In Norway, a **commercial mix of dried exotic fruits** has been linked to an outbreak of *Salmonella* Agbeni. **56 people** fell ill during the outbreak, which lasted from the end of 2018 until mid-March in 2019, with 21 requiring hospitalisation, although **no deaths were recorded**. [Eurosurveillance](#), 8 pages (08.04.2021).

★★★ **E. coli:** In August 2020, an outbreak of **Shiga toxin-producing *Escherichia coli* (STEC) O157:H7** occurred in the UK. Epidemiological and genetic evidence suggested that a **fast-food product containing cucumber** was the likely cause of this outbreak. [InternationalJournalOfInfectiousDiseases](#), 25 pages (22.04.2021).

★ **Hepatitis A:** The authorities in the United Kingdom are launching an investigation into almost **30 cases of Hepatitis A**, some of which have been linked to imported **dates** (see Seismo Info 05/2019 and 07/2019). [FoodSafetyNews](#), 2 pages (19.04.2021). Original publication: [FSA](#).

Food safety

★★★ **Smoked fish:** The Swiss Federal food safety and veterinary office (FSVO) has conducted a **food risk assessment** on smoked fish as part of a pilot study carried out in partnership with the Office of Consumer Affairs of the Canton of Vaud. [FSVO](#), 17 pages. (16.04.2021).

★★★ **Allergens:** An American university has carried out a study into **how much peanut protein people with allergies can tolerate**. It was calculated that respective doses of **0.052 (ED01)** and **0.49 mg (ED05)** of **peanut protein** would elicit an allergic response in 1% and 5% (respectively) of those tested. [FoodSafetyMagazine](#), 1 page. (26.03.2021). Original publication: [FoodAndChemicalToxicology](#). In 2020, the Chemical and Veterinary Investigation Offices in the German federal state of Baden-Württemberg analysed **1713 samples for non-declared allergens**. Allergens were detected in eight of these samples, making them potentially **dangerous to human health**. [ua-bw](#), 5 pages. (29.04.2021).

★★★ **Antibiotic resistance:** The European Food Safety Authority (EFSA) and the European Centre for Disease Prevention and Control (ECDC) have published the European Union **Summary Report on Antimicrobial Resistance in 2018/2019**. The report was published alongside an article entitled "[Resistance levels still high in bacteria causing foodborne infections](#)". [EFSA](#), 179 pages. (08.04.2021).

★★★ **Pesticides:** The European Food Safety Authority (EFSA) has published its annual report on **pesticide residues found in food** in the European Union. The report is based on data from the official national control activities carried out by EU Member States, Iceland and Norway. [EFSA](#), 103 pages. (02.04.2021). A **global map of agricultural land** has revealed that 64 percent of land used for agriculture and food crops **is at risk of pesticide pollution**. Almost a third of these areas are considered to be at high-risk. [ScienceDaily](#), 2 pages. (30.03.2021). Original publication: [NatureGeosciences](#).

★★★ **Parasites in fresh produce: Fruit and vegetables** sold in Italy have been analysed for **the presence of three parasites: *Cyclospora cayentanensis*, *Toxoplasma gondii* and *Echinococcus* spp.** *Cyclospora* was detected in **berries**, while *E. multilocularis* was found in pre-packaged **salad**. [FoodMicrobiology](#), 8 pages. (09.2021).

★★★ **Food safety:** A study has collected feedback from 30 food industry experts to identify the **most critical issues** facing the food industry in relation to food safety. [JournalOfFoodProtection](#), 8 pages. (04.2021).

★★★ **Milk and infant formula:** Samples of milk and infant formula from all over Europe were analysed regarding **compounds of high toxicity** for which the default maximum residue level (MRL) of 0.01 mg/kg for infant formulae is not considered safe. In total, 54 samples of milk and 80 samples of infant formula were analysed. [EURL-SRM](#), 13 pages. (26.04.2021).

★★ **Natural antimicrobial:** C-SNIPER, a project financed by the European Institute of Innovation and Technology (EIT), seeks the development of a **natural antimicrobial** to help **reduce** the presence of **Campylobacter** in the farming, slaughtering and/or preparation of **poultry**. [EIT](#), 2 pages. (29.03.2021).

★★ **Salt and drinking water:** Road salt, which is used to prevent frost and ice forming in winter, is an important tool for ensuring safety; however, a recent study has warned that **the introduction of salt into the environment** releases **cocktails of toxic chemicals** that pose a **growing risk** to freshwater reserves and to human health. [Biogeochemistry](#), 38 pages. (12.04.2021).

★★ **Sweets infused with cannabis:** In England, four **children** had to be **taken to hospital** after they ate sweets thought to contain cannabis. The case is similar to another incident involving adolescents in 2020 (see Seismo Info 11.2020). [BBCNews](#), 2 pages. (03.05.2021).

★ **Listeria monocytogenes:** In the United States, several packages of **Enoki mushrooms** have been found to be contaminated with *Listeria monocytogenes*. [FoodSafetyNews](#), 2 pages. (21.04.2021). Original publication: [FDA](#).

Food fraud

★★★ **Supply chain:** A survey of the **beverage industry** has been conducted to better understand the **risks affecting the supply chain** across the sector. 97% of those asked confirmed that they have been **affected by food fraud** over the last 12 months. Only 22% of producers said they feel “very confident” their suppliers are meeting food safety standards. [DairyReporter](#), 2 pages. (15.04.2021). Original publication: [LloydsRegister](#).

★★★ **Tomatoes:** In Italy, around **3,500 tonnes of tinned tomatoes** have been seized in the largest case of food fraud ever discovered in the country. Although advertised as “containing 100% Italian tomatoes”, it was revealed that the product in fact used **processed tomatoes from outside Europe**. [IITempo](#), 2 pages. (28.04.2021).

★★ **Analytical method:** Researchers have optimised a “handheld pen” to **identify common types of meat and fish** within **15 seconds**. [EurekAlert!](#), 1 page. (31.03.2021). Original publication: [JournalofAgriculturalAndFoodChemistry](#).

★★ **Food distribution:** Spanish authorities have seized more than **170 tons of food** at a non-profit organization for **violations of quality and food safety rules**. [FoodSafetyNews](#), 1 page. (22.04.2021).

Close up

★★★ **Statistics on foodborne diseases:** The Federal food safety and veterinary office (FSVO) has published a report on **foodborne diseases that affected more than one person** in Switzerland during 2020. [FSVO](#), 4 pages. (23.04.2021).

★★★ **Listeria monocytogenes:** A recently-published epidemiological report has revealed the **high prevalence** of *Listeria monocytogenes* among **Europe’s** human population and in the continent’s supply chains. [PanoramaSanita](#), 1 page. (26.03.2021). Original publication: [ECDC](#).

★★★ **Norovirus:** A study has found that some **norovirus clusters are resistant to environmental stresses and UV disinfection**. The findings suggest the need to **revisit current disinfection, sanitation and hygiene practices** aimed at protecting people from noroviruses. [EurekAlert!](#), 2 pages. (15.04.2021). Original publication: [EnvironmentalScienceAndTechnology](#).

★★★ **Legionella:** An American study has analysed **legionellosis incidence rates in the United States** and correlated them with concurrent temperature, precipitation, solar ultraviolet B (UVB) radiation, and vehicle mileage data. The results of the study suggest that **increasing temperatures** and **excess precipitation** have likely **elevated the density of Legionella bacteria** in the environment, and together with **road exposure**, explain the **rapidly rising incidence** of legionellosis in the country. [PLOSOne](#), 19 pages. (22.04.2021).

★★★ **Cryptosporidium:** Public health officials in Ireland have issued a warning following a **large increase in cryptosporidium infections** in the past month. Since the beginning of March, the number of cryptosporidiosis patients has **more than doubled** compared to the average, especially in small children aged 1 to 4 years old. [FoodSafetyNews](#), 2 pages. (25.03.2021). Original publication: [HPSC](#).

★★★ **Eating disorders and Covid-19:** The Covid-19 pandemic has been linked with six unhealthy eating behaviours. A study has revealed **an increase in eating disorders**, one of the deadliest psychiatric health concerns. [ScienceDaily](#), 2 pages. (12.04.2021). Original publication: [UniversityOfMinnesota](#).

★★ **Compost: Foodborne disease outbreaks** linked to the consumption of **fresh produce** have caused farmers to re-evaluate their practices. A recent analysis comparing **organic and conventional soil management** indicates that **animal-based composts do not promote pathogen survival** and may even promote bacterial communities that suppress pathogens. [EurekAlert!](#), 1 page. (07.04.2021). Original publication: [JournalofAppliedMicrobiology](#).

★★ **Fructose:** A recent study demonstrates that fructose causes **the immune system to become inflamed**. The findings also provide a better understanding of **how fructose is related to diabetes and obesity**. [GLP](#), 1 page. (05.03.2021). Original publication: [NatureCommunications](#).

★★ **Disinfectants:** An article has suggested that a **number of countries** are reporting **increasing rates of viral gastroenteritis** over recent months, and that the greater use of **hand sanitizers**, known to have little effect on pathogens such as norovirus, may be partly responsible. [NewAtlas](#), 2 pages. (27.03.2021).

★ **Food supplements: Omega-3 supplements may be** associated with an **increased likelihood** of developing **atrial fibrillation** in people with high blood lipids. [ScienceDaily](#), 1 page. (28.04.2021). Original publication: [EuropeanHeartJournal](#).

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

Disclaimer: The presentation of articles reflects their media presence. The FSVO assumes no responsibility for the validity of the information obtained from the scanned media channels. The expressed views are not to be taken as an official opinion of the FSVO.



Seismo Info 04/2021



Source: mvcaspel, Fotolia

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

[FSVO website](#)

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

Food trends

★★★★ **Online sale of food:** The Federal Food Safety and Veterinary Office (FSVO) has published a new **briefing letter** on the topic of **online meal-ordering platforms**. The document provides an overview of the subject with particular emphasis on the possible implications for food safety. [FSVO](#), 2 pages. (04.03.2021).

★★★★ **Ultrasound:** A new study has shown that a combination of **gentle streams of water, sound waves** and **microscopic air bubbles** can clean bacteria from salad leaves more effectively than current salad-washing methods. [EurekAlert!](#), 2 pages. (02.03.2021). Original publication: [UltrasoundMedecineBiology](#).

★★ **Irradiation:** A recently published survey predicts that the **food irradiation market will grow** over the coming years. [FoodSafetyNews](#), 2 pages. (26.02.2021).

★★ **Upcycling:** A recent publication examines the **potential for “upcycling”** within the food industry and **offers advice to manufacturers**. [NewFoodMagazine](#), 6 pages. (02.03.2021).

★★ **Veganism:** The German Federal Institute for Risk Assessment (BfR) recently conducted a new study in which the **bone health** of 36 **vegans** and 36 people following a mixed-food diet was determined. On average, people following a vegan diet had lower ultrasound values compared to the other group; this indicates **poorer bone health**. [EurekAlert!](#), 1 page. (04.03.2021). Original publication: [BfR](#).

★ **Ultra-processed food:** A recently published study has found that higher **consumption** of ultra-processed foods is associated with an **increased risk of mortality** and incidence of **cardiovascular diseases**. [EurekAlert!](#), 4 pages. (22.03.2021). Original publication: [JACC](#).

Unusual outbreaks

★★★ **Salmonella Enteritidis:** Nearly 200 people in eight European countries and the **United Kingdom** are involved in an ongoing **Salmonella outbreak** that began in May 2018. *Salmonella Enteritidis* infections have been linked to **frozen breaded chicken products** from Poland, with the most recent illness being reported in the UK in December 2020. [FoodSafetyNews](#), 2 pages. (26.02.2021). Original publication: [ECDC](#).

★★★ **Norovirus:** Several **collective foodborne toxi-infections**, possibly linked to the consumption of **oysters**, have been reported in various parts of France since mid-February 2021. [SantéPubliqueFrance](#), 4 pages. (03.2021). Certain **areas** have been **temporarily closed for business**; these can be identified via an online map hosted by [atlas-sanitaire-coquillages.fr](#). An outbreak of norovirus in **Sweden** linked to the consumption of **shrimp-based products** has affected more than **100 people**. [FoodSafetyNews](#), 2 pages (12.03.2021). In the **United States**, the Centers for Disease Control and Prevention (CDC) has reported an outbreak of **norovirus GIV**, with 53 persons declared ill. The outbreak has been linked to **individually prepared fruit** that was eaten as part of a fruit salad. [CDC](#), 4 pages (04.2021).

★★★ **Non-viral Hepatitis:** In March, the U.S. Food and Drug Administration (FDA) was alerted to **five cases of acute non-viral hepatitis** in **infants** and young children that occurred in November 2020. All patients were reported to have consumed **alkaline water** produced by the same brand. An investigation is currently underway. [Outbreak-NewsToday](#), 1 page (16.03.2021). Original publication: [FDA](#).

★★ **Hepatitis A:** Two outbreaks of hepatitis A virus (HAV) are under investigation in **Ireland**. A total of 21 patients have been identified during a three-month period in Dublin. **No single, food-based source** has been identified. The possible environmental transmission of HAV from sewage and stagnant water may have contributed to the second outbreak. [FoodSafetyNews](#), 2 pages (11.03.2021).

★★ **Tropane alkaloids:** An **incident of tropane alkaloid food poisoning** has been reported via the RASFF's portal. **Deep frozen spinach purée** produced in Slovakia is suspected to be the cause of the poisoning. [RASFF](#), 1 page (19.03.2021). Authorities have not specified **how many people have been affected**, but figures in local media vary from a dozen to up to 100 with some needing hospital treatment. [FoodSafetyNews](#), 2 pages. (31.03.2021).

★★ **Yersinia enterocolitica:** The **Swedish** Public Health Agency has declared that the **outbreak** of *Yersinia enterocolitica* in the country (see Seismo Info from March 2021) has **ended**. The subsequent investigation revealed that a contaminated batch of **iceberg lettuce** distributed to a restaurant chain is the suspected source of the infection. [OutbreakNewsToday](#), 1 page (17.03.2021).

Food safety

★★★ **Streptococcus agalactiae ST283:** The Federal food safety and veterinary office (FSVO) has published a new **briefing letter** on the topic of *Streptococcus agalactiae* ST283. [FSVO](#), 2 pages. (24.03.2021).

★★★ **Norovirus and Hepatitis A:** A study that was recently published in the Netherlands has evaluated the **contamination levels of Norovirus and Hepatitis A in oysters and mussels**. Norovirus RNA was observed in 53.1% of mussel samples and in 31.6% of oyster samples; one instance of the Hepatitis A virus was detected (0.3%). [IntJFoodMicrobiology](#), 8 pages. (16.04.2021).

★★★ **Zoonoses in Europe:** The European Food Safety Authority (EFSA) and the European Centre for Disease Prevention and Control (ECDC) have published their **report on zoonoses monitoring** in the European Union in 2019. [EFSA](#), 286 pages. (19.01.2021).

★★★ **Food safety and Covid-19:** A survey has been conducted in the United States to gauge the **public perception of food safety** during the Covid-19 pandemic, the results of which are now available. [DigitalEditionFood-Safety](#), 5 pages. (03.2021).

★★★ **Radioactivity:** Ten years after the **Fukushima nuclear disaster**, the question of **radioactivity in tea grown in Japan and the rest of Asia** still worries consumers. Investigations carried out in Germany have revealed that **no measurable traces of man-made radionuclides** such as Cs-137 could be found in tea produced in Japan or other East Asian countries. [UntersuchungsamtBadenWuerttemberg](#), 1 page. (09.03.2021).

★★★ **Botulism: Home canning and food preservation** has once again become a popular pastime following the coronavirus pandemic. However, **inadequately** prepared canned food is suspected to be the cause of several cases of botulism reported in the United States. [ProMedMail](#), 1 page (17.03.2021). Original publication: [JournalAdvocate](#).

★★★ **Shigella:** In 2018, an **outbreak** involving 33 cases of Shigella in England was linked to the consumption of food from seven catering outlets specialising in **Indian and Middle Eastern cuisine**. A subsequent investigation revealed that in 86% of the cases, the victim had eaten a dish in which **coriander** was used either as an ingredient or as a garnish. [EpidemiologyAndInfection](#), 7 pages (01.03.2021).

★★ **Giardia duodenalis:** The U.S Centers for Disease Control and Prevention (CDC) has published an **analysis of outbreaks of Giardia duodenalis** in the United States between 2012 and 2017. During the study period, 111 giardiasis outbreaks were reported. The outbreaks occurred most frequently in households and were most commonly linked to the use of **contaminated water** – such as untreated drinking or recreational water – or **transmission from person-to-person**. [CDC](#), 4 pages. (05.04.2021).

★★ **Legionella:** A **study published in Spain** has conducted a nationwide analysis of the presence of legionella bacteria in the water distribution networks of several state-owned facilities. Legionella bacteria was found in just over 15% of the analysed water samples. **Legionella non-pneumophila** was the most prevalent of these, with *L. anisa* and *L. jordanis* being the most frequently isolated. **Legionella donaldsonii** was isolated in Spain's water distribution networks **for the first time**. [WaterResearch](#), 42 pages. (07.03.2021).

★★ **RASFF:** An **analysis of all RASFF notifications from 2020** has been conducted. Of the 3773 notifications, **over half** related to **products from countries outside of the EU**. [BalcaniCaucaso](#), 5 pages (16.03.2021).

★ **Allergen information and non-prepacked food:** A study published by the Food Standards Agency (FSA), in the United Kingdom, explored the **current provision of information on allergenic ingredients** by food businesses to consumers for **non-prepacked food**, and how this has changed since legislative changes came into force in 2014. [FoodStandardsAgency](#), 2 pages (22.03.2021). Original publication: [FSA](#).

★ **Apricot kernels:** For the third time this month, apricot kernels (also known as “pits” or “seeds”) are being **re-called** in Canada due to containing elevated levels of **cyanide** that could lead to food poisoning (Canadian Food Inspection Agency, or CFIA). [FoodSafetyNews](#), 2 pages (24.03.2021). Original publication: [CanadianFoodInspection-Agency](#).

Food fraud

★★★ **Fish and seafood:** Analysis of 44 recent studies of more than 9,000 fish and seafood samples obtained in **more than 30 countries** has found that **36% were mislabelled**, exposing possible seafood **fraud** on a global scale. [TheGuardian](#), 5 pages. (15.03.2021).

★★ **Fighting food fraud: United Kingdom's** National Food Crime Unit (NFCU) has developed a food fraud resilience **self-assessment tool** to **support businesses** in developing and implementing their counter-fraud strategy. [FSA](#) (03.03.2021).

★★ **Nuts:** The **Spanish** nut industry has indicated that **imported nuts are being sold as domestic produce**, at prices that are less than their production costs, since December 2020. HoizonScan, (04.03.2021). Original publication: [Agrodigital](#).

★ **Elderberry:** The popularity of **elderberry based dietary supplements** has increased during the coronavirus pandemic due to their purported **immunomodulatory and antiviral effects**. This has raised concerns that demand would outpace supply and that some of the elderberry extracts and dietary supplements offered would be of **low quality or adulterated**. However, **no data** explicitly reporting the adulteration of elderberries or elderberry extracts **has been found**. [Herbalgram](#), (03.2021), 5 pages.

Close up

★★★ **Enterotoxins:** A recent study, conducted in France by Agroscope and the French Agency for Food, Environmental and Occupational Health and Safety (ANSES), puts forward a **new method** for **predicting the production of enterotoxins by Staphylococcus bacteria** using whole-genome data. [AppliedAndEnvironmentalMicrobioloy](#), 15 pages. (03.2021). [Agroscope](#).

★★ **Legionella longbeachae:** From April to June 2018, a nationwide **threefold increase** in the number of instances of legionnaire's disease by **L. non-pneumophila LD**, including *L. longbeachae*, was observed in **Sweden**. An epidemiological investigation was unable to confirm the exact source of the outbreak, but did discover an **association** with gardening activities related to the **handling of soil**. [Eurosurveillance](#), 9 pages. (18.02.2021).

★★ **Nutrition:** There is **limited prospective evidence** on the **association** between **meat consumption** and **general health**. British researchers have examined the associations between the consumption of meat and the risk of **25 common, non-cancerous conditions**. [BMCMedicine](#), 14 pages. (02.03.2021). Another study associated the consumption of processed meat with an **increased risk of developing dementia**; according to the findings, eating a 25g serving of processed meat per day is associated with a **44% increased risk** of developing the disease. [ScienceDaily](#), 2 pages. (21.03.2021). Original publication: [AmericanJournalClinicalNutrition](#).

★★ **Tert-butylhydroquinone:** A recent study has found that Tert-butylhydroquinone (or TBHQ) a **food preservative** used to extend the shelf-life of several processed foodstuffs, can **damage the immune system**. [EurekAlert!](#), 2 pages. (25.03.2021). Original publication: [InternationalJournalOfEnvironmentalResearchAndPublicHealth](#).

★ **Anisakis:** A recent publication provides an overview of the **intrinsic characteristics of Anisakid nematode larvae** and outlines the **latest detection methods** discussed in scientific literature. The review intends to highlight trends and provide **suggestions** for the **development of detection and identification methods** of the larvae in fish products. [IntJFoodMicrobiology](#), 10 pages. (02.04.2021).

★ **Legionella pneumophila:** A recent study has revealed that **treating the water** in cooling towers by **increasing its PH** to ≥ 9.6 , rather than using disinfectant for the same purpose, is an **effective means of controlling pathogens** including *L. pneumophila*. [WaterResearch](#), 32 pages. (15.03.2021).

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

Disclaimer: The presentation of articles reflects their media presence. The FSVO assumes no responsibility for the validity of the information obtained from the scanned media channels. The expressed views are not to be taken as an official opinion of the FSVO.



Seismo Info 03/2021



Source: mvcaspel, Fotolia

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

[FSVO website](#)

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

Food trends

★★★★ **Foodborne parasites:** Adequate **surveillance programmes** for most foodborne **parasites** in Europe **are lacking**, according to a recently published study. Researchers found that, although human and animal data are available for five selected parasites, the surveillance and reporting requirements vary among and within regions and countries, and among national experts and European bodies. [FoodSafetyNews](#), 2 pages. (20.02.2020). Original publication: [ParasiteEpidemiologyAndControl](#).

★★★★ **Ultra-processed food:** A new UK study has demonstrated that a diet **high in ultra-processed foods** is associated with an **increased risk of type 2 diabetes**. The authors state that identifying and implementing effective public health actions to reduce ultra-processed food consumption is urgently required. [CliNutr](#), 7 pages. (28.12.2020).

★★★ **Food during COVID-19:** To better understand the ways in which people's **food-related behaviours** have altered as a result of COVID-19, and what future challenges and opportunities this might create for the food system, a consortium of universities in Europe led by Aarhus University, Denmark, **surveyed 5,000 consumers** across ten European countries. The report of this research has been published. [EIT](#), 7 pages. (2020).

★★★ **Social media:** The Food Standards Agency, the UK's food safety agency, reports a "**concerning**" rise in food businesses operating out of **private kitchens** selling meals through social media. Many are **failing to register** as food businesses, meaning their hygiene arrangements are not checked by local authorities. But even those that do register are often not getting an inspection – despite new businesses usually being a priority – because the system is struggling to keep up during the pandemic. [BBCNews](#), 3 pages. (15.02.2020). These concerns are shared by a UK organisation, the Natasha Foundation. The organisation's founder said the emergence of **tens of thousands of at-home and dark kitchens** during the COVID-19 pandemic raises fears about food safety, particularly for the two million plus people in the UK who have **food allergies**. [FoodSafetyNews](#), 2 pages. (19.02.2021).

★★ **Veganism:** Researchers report a study on the metabolic effects of a **vegan diet** on **young children**. The study found vegan children to have a remarkably altered metabolism and a **lower vitamin A and D** status compared to children with no special diet. [ScienceDaily](#), 2 pages. (21.01.2021). Original publication: [EMBOMolecularMedicine](#). Another study conducted at the University of Helsinki concluded that both **bone formation and resorption increased** when part of the **animal protein** in the diet was **replaced with plant protein**, which may in the long term be detrimental to bone health. The researchers suggest the changes in bone metabolism as well as calcium and vitamin D intakes are probably caused by the low amount of dairy products. [EurekAlert!](#), 1 page. (10.02.2021). Original publication: [JournalOfNutrition](#).

★★ **Mushrooms:** New research has found that adding a mushroom serving to the diet increased the intake of several **micronutrients**, including shortfall nutrients such as vitamin D, without any increase in calories, sodium or fat. [EurekAlert!](#), 2 pages. (01.02.2021). Original publication: [FoodScienceAndNutrition](#).

Unusual outbreaks

★★★ **Avocados:** To determine whether avocados have been a **source of listeriosis**, US researchers conducted a retrospective review of epidemiological data for clinical isolates of *Listeria monocytogenes* that were genetically related to isolates from avocados. The results of the study suggest that avocados **could be a source of listeriosis** in the USA. [JFoodProtection](#), 1 page (abstract). (16.02.2021).

★★ **Escherichia coli O121:** In 2018, a Shiga toxin-producing *Escherichia coli* O121 **outbreak** in Canada was associated with **raw milk** Gouda-like **cheese** produced in Canada. The outbreak affected seven individuals. The **results of the epidemiological investigation** and recommendations for stricter control measures have been published by the Canadian authorities. [CCDR](#), 1 page. (09.02.2021).

★★ **Escherichia coli O157:H7:** The Food and Drug Administration (FDA) has published the **results of its investigation** into the 2020 outbreak of *Escherichia coli* O157:H7 linked to **leafy greens**. The investigation found that **cattle** grazing on lands near leafy greens fields could have increased the risk of product contamination. [FoodSafetyMagazine](#), 1 page. (28.01.2021). Original publication: [FDA](#). Also in the US, a new **outbreak of Escherichia coli O157:H7 infections** is being investigated by the Centers for Disease Control and Prevention (CDC), along with federal and state health agencies. Present in multiple states, as of 1 February the outbreak has infected a total of 16 people, 3 of whom developed haemolytic uremic syndrome (HUS); one death has been reported. The **food source** linked to the outbreak is still being investigated. [OutbreakNewsToday](#), 1 page (03.02.2021). Original publication: [CDC](#).

Food safety

★★★ **Allergens:** Swiss cantonal chemists have tested almost **500 food products** to determine whether **undeclared milk and peanuts are present**. Five products containing undeclared milk were removed from sale. No cases where undeclared peanuts were present were found. The low level of non-compliant samples shows that the **safety of consumers who suffer from allergies is generally guaranteed** in Switzerland. [AssociationChimistesCantonaux](#), 2 pages. (03.02.2021).

★★★ **COVID-19:** According to various US authorities (the US Department of Agriculture, the Food and Drug Administration and the Centers for Disease Control and Prevention), there is **no credible evidence** of food or food packaging associated with, or as a likely source of, **viral transmission of SARS-CoV-2**, the virus causing COVID-19. [FoodSafetyNews](#), 2 pages. (22.02.2021).

★★★ **COVID-19:** During the early phase of the pandemic, several large outbreaks of coronavirus disease 2019 (COVID-19) occurred in food manufacturing. US researchers analysed **environmental samples** between March and September 2020 and found that 1.23% of samples were positive for SARS-CoV-2. Virus contamination was commonly found on **frequently touched surfaces** such as doorknobs, handles, table surfaces and sanitiser dispensers. [JournalOfFoodProtection](#), 7 pages. (18.01.2021).

★★★ ***Vibrio parahaemolyticus*:** Scientists in England have discovered how certain types of bacteria **can go dormant and then “wake up”**. *Vibrio parahaemolyticus* is a marine bacterium that can cause gastroenteritis when contaminated raw or undercooked **shellfish** such as oysters and mussels are eaten. It is able to turn dormant in poor growth conditions such as cold temperatures and can remain in a state of hibernation for long periods of time before resuscitating. The findings of the study have **implications for seafood safety**, as dormant cells are not detectable using routine microbiological screening tests and the true bacterial load could be underestimated. [FoodSafetyNews](#), 2 pages. (01.02.2021). Original publication: [PLOSPathogens](#).

★★★ **Packaging and nanoparticles:** **Antimicrobial packaging** is being developed to extend the shelf life and safety of foods and beverages. However, there is concern about the **transfer of potentially harmful materials**, such as silver nanoparticles, from these types of containers to consumables. Researchers have demonstrated that silver embedded in an antimicrobial plastic can leave the material and form **nanoparticles** in foods and beverages, particularly in sugary ones. [ScienceDaily](#), 1 page. (03.02.2021). Original publication: [ACSApplWaterInterfaces](#).

★★ ***E. coli* ST 131:** At the request of the FSVO, Zurich University of Applied Sciences (ZHAW) has published the results of a **study of the prevalence** of *E. coli* ST 131 in **Swiss chicken**. A total of 200 samples were bought in summer 2020; 25 (12.5%) tested positive. Organic chicken samples were positive in 12 cases (20% of samples), while conventional chicken samples were positive in 13 cases (9.2% of samples). [FSVO](#), 10 pages. (11.02.2021).

★★ **Mycotoxins:** The results of analyses of **Swiss barley grains and straw** to detect **fungal metabolites**, including mycotoxins, have been published. In total, 253 samples of grains were analysed; 87 fungal metabolites were detected. **None of the cereal samples exceeded the permitted limits** of mycotoxins set by the European Commission. The authors conclude that future studies should focus on the toxicology of the fungal metabolites that occurred at elevated concentrations as well as the health impact of **co-occurrence of metabolites**. [FoodControl](#), 30 pages. (02.02.2021).

★★ **Baby food:** According to a report issued by the **US House of Representatives**, commercial baby foods sold in the USA are **tainted with significant levels of toxic heavy metals**, including arsenic, lead, cadmium and mercury. [USHouseOfRepresentatives](#), 59 pages. (04.02.2021). The Food and Drug Administration (FDA), the US food safety agency, has responded to the publication of this report in an **official response** on its website. [FDA](#), 2 pages. (16.02.2021).

★★ **Anisakis in squid:** The occurrence and site of infection of **Anisakis larvae** in *Todarodes sagittatus*, a squid, were investigated. **Over a third of squids (37%)** hosted **Anisakis larvae** in the mantle. The authors conclude that the risk of anisakiasis associated with the consumption of raw or undercooked squid should be considered. [IntJFoodMicrobiology](#), 7 pages. (02.02.2021).

★★ **Anisakis in mariculture:** A study has found a **low risk of Anisakis larvae infection** in fish products from **European mariculture activities**. The current European Union regulations state that it is mandatory to freeze fish products intended to be eaten raw or undercooked but exclude farmed Atlantic salmon. The study's authors believe that, based on their results, farmed gilthead seabream, European seabass, turbot and marine rainbow trout should also benefit from the exemption from freezing treatment. [FoodSafetyNews](#), 2 pages. (11.02.2021). Original publication: [Eurosurveillance](#).

★★ **Hepatitis E in pork:** Researchers screened **minced pork** and **pork liver** for the presence of **hepatitis E virus (HEV) RNA**. Fifteen out of 119 minced pork samples **tested positive**; 25 out of 56 pork liver samples were positive. The results indicate that **minced pork and pork liver are a potential source of HEV**. [IntJFoodMicrobiology](#), 6 pages. (02.02.2021).

★★ **Extensively drug-resistant Salmonella Typhi :** The Centers for Disease Control and Prevention (CDC) in the USA has issued an **official advisory** concerning the **upsurge of extensively drug-resistant (XDR) Salmonella Typhi infections** among US residents **without international travel**. The infection is food and waterborne and has a fatality rate of 12% to 30% without proper medical treatment. [FoodSafetyNews](#), 2 pages. (17.02.2021). Original publication: [CDC](#).

★ **Kitchen hygiene:** A study was conducted to determine whether hygiene practices in television **cooking programmes** influence viewers' **kitchen hygiene**. Participants who had watched a cooking video with correct hygiene practices committed significantly fewer hygiene lapses than those who had watched a video with poor hygiene practices. The authors conclude that cooking programmes are well placed to convey knowledge of essential hygiene practices during food preparation to a **broad audience**. [RiskAnalysis](#), 10 pages. (2021).

★ **Salmonella enteritidis:** Data relating to all outbreaks of foodborne *Salmonella enteritidis* reported to the Centers for Disease Control and Prevention (CDC) between 1990 and 2015 were analysed to evaluate **the role of eggs and other food vehicles** as risk factors. The analysis concluded that a **significant proportion** of outbreaks of foodborne *Salmonella enteritidis* was attributed to **food other than eggs**. [InternationalJournalOfInfectiousDiseases](#), 37 pages. (10.02.2021).

★ **Pyrrolizidine alkaloids:** In Austria, 49 samples of **teas** and **herbal teas** were analysed to obtain an overview of contamination with pyrrolizidine alkaloids (PA). **Twelve samples showed an increased PA content**. There is a low risk to health which cannot, however, be entirely ruled out according to the authors. [AGES](#), 3 pages. (18.01.2021).

Food fraud

★★★ **Greenwashing:** According to an investigation by the International **Consumer Protection Enforcement Network**, 40% of firms' **environmental claims** could be **misleading**. Four in ten websites appear to be using "greenwashing" tactics that could be considered misleading and that therefore potentially break consumer law. [FoodNavigator](#), 1 page. (05.02.2021).

★★★ **COVID-19 and food fraud:** Recent reports suggest the potential for **increased fraud** in global food supply chains due to the impact of COVID-19. The Food Authenticity Network (FAN) and Mérieux Nutrisciences have collaborated to undertake a **detailed assessment of the data** to establish whether food fraud incidents are indeed increasing. [Gov.UK](#), 10 pages. (08.02.2021).

Close up

★★★ **COVID-19 and foodborne diseases:** In 2020, the **number of food poisoning cases** was the **lowest ever recorded in Korea** as the COVID-19 pandemic forced cafeterias to close and increased emphasis on personal hygiene. According to the Korean Ministry of Food and Drug Safety, the number of reported cases reached 178, down 52% from the average of 343 cases per year since 2015. [TheKoreaHerald](#), 1 page. (07.02.2021). A **similar observation** can be made in France regarding various seasonal viruses including gastroenteritis (rotavirus, norovirus, enterovirus, sapovirus). In the **USA**, a study has confirmed that the health measures taken in the nine US states investigated **reduced norovirus circulation** by 61%. [LeMonde](#), 3 pages (07.02.2021). In **Germany**, a study carried out by the Robert Koch Institute comes to similar conclusions, namely that **reportable infectious diseases**, including foodborne infections, **declined** after public health measures were introduced because of the pandemic. [FoodSafetyNews](#), 2 pages (16.02.2021).

★★★ **Yersinia enterocolitica:** Swedish public health officials have reported an **increase** in *Yersinia* infections in recent weeks. Since the second week of January, **more than twice as many people** have fallen ill with yersiniosis compared to the same period in past years. Folkhälsomyndigheten, the Swedish public health agency, and local infection control units in affected regions are **trying to identify the source of infection**. [FoodSafetyNews](#), 2 pages. (06.02.2021).

★★★ **Campylobacter:** In 2006, **New Zealand** had one of the world's highest rates of campylobacteriosis with 379 cases per 100,000 people. Since then, the country's **management strategy** has helped to reduce the disease to 126.1 cases per 100,000 people as of 2019, the lowest it has been since 1992. In 2020, New Zealand's food safety ministry introduced a goal of **reducing foodborne campylobacteriosis** in the country **by 20%** by the end of 2025. [FoodSafetyNews](#), 2 pages (03.02.2021). Original publications: [MinistryForPrimaryIndustries](#). [Strategy 2017-2020. Action Plan 2020-2021](#). 2 pages. (03.02.2021). In **France**, data published by Sante Publique France on *Campylobacter* in 2019 shows a **slight increase** compared to the year before. In total, 8,309 strains of *Campylobacter* and related bacteria were reported. *Campylobacter jejuni* was identified most frequently (6,526 times), followed by *C. coli* (1,061 times) and *C. foetus* (75 times). A **seasonal upsurge** was observed during the summer period, with a peak in August. [FoodSafetyNews](#), 2 pages. (07.02.2021). Original publication: [SantéPubliqueFrance](#). A new study describes how using whole genome sequences (**WGS**) and implementing multiple **machine learning algorithms** have allowed a **more precise attribution of the source of Campylobacter infection**. [BioRxiv](#), 31 pages. (23.02.2021).

★★★ **Vitamin D:** Scientists have calculated that if all Germans over the age of 50 were to take vitamin D **supplements, up to 30,000 cancer deaths per year could possibly be avoided** and more than 300,000 years of life could be gained – in addition, health care costs could be saved. [ScienceDaily](#), 2 pages. (10.02.2021). Original publication: [MolecularOncology](#).

★★ **Irradiation:** The European Commission has published a report on the **checks relating to irradiation**, a physical treatment for reducing the number of micro-organisms in certain foods. The checks concern both the **proper functioning of approved facilities** and the **foodstuffs** treated using this process. [Eur-Lex](#), 7 pages. (24.02.2021).

★★ **Legionella bozemanii:** In Italy, strains of *Legionella bozemanii* were detected in 2020 in **water samples** taken by the health authorities in establishments linked to cases of legionellosis. *L. bozemanii* is similar to the more widespread *Legionella pneumophila* and has comparable pathogenicity. **This species of Legionella had not been identified before in the region concerned** (Friuli Venezia Giulia), with the exception of an isolation registered in 2019. [SNPAmbiente](#), 1 page. (08.02.2021).

★★★ **Campylobacter:** New research from North Carolina State University has found that *Campylobacter* **persist throughout poultry production** – from farm to grocery shelves – and that two of the most common strains are exchanging genetic material, which could result in more **antibiotic-resistant** and infectious *Campylobacter* strains. [ScienceDaily](#), 2 pages. (16.02.2021). Original publication: [NCStateUniversity](#).

★★★ **Staphylococcus saprophyticus:** *Staphylococcus saprophyticus* is a **primary cause of urinary tract infections** in young women but basic features of its molecular epidemiology are undetermined. Researchers conducted a **phylogenomic analysis** of isolates collected from urinary tract infections and isolates from the pig processing chain. **The meat production chain** seems to be a **major source** of *S. saprophyticus* causing human urinary tract infections. [EmergingInfectiousDiseases](#), 14 pages. (03.2021).

★★★ **Allergies:** A UK study has analysed admissions to British hospitals for food-induced **anaphylaxis** between 1998 and 2018 and how these compare to fatal anaphylaxis events. Results indicate that **deaths from serious allergic reactions** have **declined** over the past 20 years, despite an increase in hospital admissions for food-induced anaphylaxis over the same time. [ImperialCollegeLondon](#), 2 pages. (17.02.2021). Original publication: [BMJ](#).

★ **Food:** A study explored the **impact of passive food preparation** (watching someone else cooking) and active food preparation (cooking yourself) **on eating behaviour**. The authors found that the participants who had watched someone cook and those who had cooked themselves ate 14% and 11% more respectively than those who had done an activity that was unrelated to cooking. [TheConversation](#), 2 pages. (19.02.2021). Original publication: [Appetite](#).

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

Disclaimer: The presentation of articles reflects their media presence. The FSVO assumes no responsibility for the validity of the information obtained from the scanned media channels. The expressed views are not to be taken as an official opinion of the FSVO.



Seismo Info 02/2021



Source: mvcaspe, Fotolia

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

[FSVO website](#)

Additional subjects that are relevant to early detection can be found in our online database [ADURA](#).

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

Food trends

★★★★ **Insects:** The European Food Safety Authority (EFSA) has published its first scientific opinion on an insect-derived food. The organisation concludes that **mealworms** (*Tenebrio molitor*) are **safe** for human consumption. [Food-Navigator](#), 1 page. (14.01.2021). Original publication: [EFSA](#).

★★★ **Sustainable consumption:** To help consumers evaluate whether a food product has been **produced and sold** sustainably, an **application** has been created by a team of researchers with the involvement of ETH Zurich, partners from Spain, Germany and Estonia, and two supermarket chains. **Product information** has been compiled and integrated into the program in collaboration with consumer advocates and NGOs. [FoodAktuell](#), 2 pages. (15.01.2021). Original publication: [RoyalSocietyOpenScience](#).

★★★ **Sale of meat on social media:** The UK Food Standards Agency has **warned** consumers about **meat marketed via Facebook** by an unregistered and unapproved vendor. [FoodManufacture](#), 2 pages. (20.01.2021). Original publication: [FSA](#).

★ **COVID-19:** Almost a year since the start of the pandemic in Europe, many of those infected who reported **losing their sense of smell and taste** still have not recovered these senses. A publication reviews the **potential implications for food industry** innovation. [FoodNavigator](#), 3 pages. (15.01.2021).

Unusual outbreaks

★★★ **Campylobacter lanienae:** *Campylobacter lanienae* is a **rare species of Campylobacter spp.**, considered an **emerging zoonotic** pathogen. It was first isolated in Switzerland from healthy abattoir workers and at first its pathogenic potential for humans was considered to be low. A **case of mild C. lanienae-associated enteritis** with subsequent asymptomatic excretion in a butcher is described in a recent publication. [MicrobiologySociety](#), 5 pages. (25.01.2021).

★★ **Legionellosis:** In a follow-up on the Legionnaires' disease **outbreak** in the **North Region of Portugal**, health authorities have declared the outbreak **over**, according to the European Centre for Disease Prevention and Control (ECDC). The outbreak, which began in late October, resulted in a total of **88 cases**, including **15 deaths**. The source of exposure has not been identified. [OutbreakNewsToday](#), 1 page (22.01.2021). Original publication: [ECDC](#). In relation to this outbreak, a new publication presents the case of a patient diagnosed with **Legionella pneumonia** and **concomitant coronavirus disease 2019 (COVID-19) pneumonia**. The differential diagnosis between these two diseases demands a high level of clinical suspicion and attention. [Cureus](#), 3 pages. (02.01.2021).

Food safety

★★★ **Early detection:** US researchers have developed a methodology based on **text mining** and **machine learning** to try to identify words and phrases in online posts that link **consumers' interactions** with **hazardous food products**. The scientists hope that this will provide a practical and inexpensive means of rapidly monitoring food safety **in real time**. [FoodSafetyNews](#), 2 pages. (10.01.2021). Original publication: [RiskAnalysis](#).

★★★ **Ciguatera:** Ciguatera is a type of food **poisoning** associated with consumption of **fishery products** that contain toxins produced by a microalgae called *Gambierdiscus toxicus*. The results of the EuroCigua project, which lasted almost five years, confirmed the **appearance of ciguatera in the European Union**, having identified native species of fish with ciguatoxins in Macaronesia, Madeira and the Canary Islands. The presence of *Gambierdiscus* in the Mediterranean Sea, Cyprus and Greece was also detected, as well as in the Balearic Islands. [FoodSafetyNews](#), 2 pages. (10.01.2021). Original publication: [aesan](#).

★★★ **Anisakis spp.:** To mitigate the risk of live intake of *Anisakis* larvae in seafood, the **EU Regulation** recommends a **temperature > 60°C** for at least one minute. A research team performed experiments with varying temperatures and heating times in order to verify the effectiveness of this treatment. According to the results, treatment at 60°C for one minute **would not be sufficient** to kill all *Anisakis* larvae. [FoodControl](#), 40 pages. (04.01.2021).

★★★ **Plant protection products in potatoes:** As part of its official food control programme, the CVUA, a chemical and veterinary analysis laboratory in Stuttgart, analysed 228 samples of **conventionally produced potatoes** for residues of over 750 **pesticides** and **contaminants** over the past five years. Residues were detected in 212 (93%) of the samples, and two or more residue substances (multiple residues) were found in 177 (78%) of the samples. An **exceedance** of the legally established **maximum level** was found in 10 (4%) of the samples. **Chlorproprham**, a growth regulator, was detected in 54% of the samples analysed. [CVUA](#), 4 pages.

★★ **Parasites: Foodborne parasitic diseases** are often neglected in food safety control systems even though they can cause severe human health problems, according to the Food and Agriculture Organization of the United Nations (FAO). The organisation has now published a document highlighting **ways to avoid the risks** from foodborne parasites transmitted by pork, freshwater fish and crustaceans. [FoodSafetyNews](#), 2 pages. (11.01.2021). Original publication: [FAO](#).

★★ **Frozen products:** The results of a targeted initiative by the Austrian authorities in which **frozen fruit, vegetables and herbs** were examined to detect contamination by pathogens such as **noroviruses, hepatitis viruses, *Listeria monocytogenes*, *Salmonella*, *Campylobacter*, STEC/VTEC, *Staphylococci* and *Escherichia coli*** are now available. 95 samples from all over Austria were examined. **No samples were contested.** [AGES](#), 3 pages. (18.01.2021).

★ **Cross-contamination:** Researchers have modelled and estimated **cross-contamination in consumer kitchens** during a European Food Safety Authority (EFSA) programme. The model was used to work out the impact of cross-contamination routes for different scenarios. **The effectiveness of several interventions** (washing hands or utensils) in reducing the risks was investigated. [FoodSafetyNews](#), 2 pages (21.01.2021). Original publication: [EFSAJournal](#).

★ **Pesticides:** A report by the **German Federal Office** of Consumer Protection and Food Safety (BVL) indicates **low levels of pesticide residues in food**. The results come from the analysis of 20,283 food samples as part of official controls in 2019. Meanwhile, the **Danish Veterinary and Food Administration** (Fødevarestyrelsen) found there is generally a **low amount of pesticide residue** in the fruit and vegetables sold in supermarkets. [FoodSafetyNews](#), 1 page. (21.01.2021). Original publications: [BVL](#); [Fødevarestyrelsen](#).

Food fraud

★★★ **Meat:** Spanish authorities have seized more than **120,000 kilos of potentially unsafe meat products**. La Guardia Civil detained 14 people and investigated another two for their part in the labelling and distribution of **meat products that had expired or were in poor condition**. Different frozen meats including chicken, beef, pork and rabbit were found at several sites in Spain. [FoodSafetyNews](#), 2 pages. (27.01.2021).

★★ **Coffee:** Roasters typically use a **blend of two types of coffee beans**, arabica and robusta. The composition of the blends is **difficult to determine** after roasting, which motivates some unscrupulous producers to use more of the cheaper robusta than they declare on the packaging. Researchers have developed a **new way** to assess exactly what is in a cup of coffee. [EurekAlert!](#), 1 page. (13.01.2021). Original publication: [JournalOfAgriculturalAndFood-Chemistry](#).

★ **Olive oil:** Authentication of **organic olives** and **olive oils** is of growing interest due to the marked development of organic olive agriculture worldwide. A new publication explores the **analytical options** for differentiating between organic and conventional olives and olive oils. [FoodControl](#), 37 pages. (Available online 07.01.2021).

★ **Basmati rice:** Because of its high commercial value, Basmati rice has **fallen victim to food fraud** by mixing or substituting it with other, lower-quality, rice varieties. A team of scientists in the United Kingdom has developed **two methods to tackle this fraud** that can accurately detect adulteration of Basmati rice. [FoodNavigator](#), 2 pages. (08.01.2021). Original publication: [Talanta](#).

Close up

★★★ **Nutrition:** The Federal Food Safety and Veterinary Office has just published the new **Swiss table of nutritional composition of food**. The brochure contains information on the nutritional composition of food marketed in Switzerland and, together with the website www.valeursnutritives.ch, it constitutes a **precious and important source of information for nutritionists** and health professionals. [FSVO](#), 148 pages. (11.01.2021).

★★★ **COVID-19:** The results of a preliminary study on the **effect of COVID-19 measures on notifiable diseases in Australia** have been published. With regard to foodborne toxi-infections, the closure of dine-in services likely contributed to a **reduction in the number of cases**. However, the authors of the study report that **changes in laboratory testing priorities** and the encouraged use of **telehealth** services are also likely to have contributed to the decline in notifications. [CommunicableDiseasesIntelligence](#), 18 pages. (05.11.2020).

★★ **Antibiotic residues:** Until now, it has been **difficult to analyse** more than a few antibiotic residues in food at a time because the residues have different chemical properties. Researchers have developed a method to **simultaneously measure 77 antibiotics** in a variety of foods. [Science Daily](#), 1 page. (27.01.2021). Original publication: [JAgricFoodChem](#).

★★ **Heat treatment: Mild heat treatment** enhances the ability of microorganisms to endure subsequent heat treatment and other environmental stresses by initiating the **heat shock response** (HSR). A study was conducted to **determine the thermal resistance** of foodborne pathogens (*Escherichia coli* O157:H7, *Salmonella enterica* serovar Typhimurium, *Listeria monocytogenes*, *Cronobacter sakazakii* and *Staphylococcus aureus*) after various heat shock treatments (50°C for 30, 60 and 120 minutes). [FoodControl](#), 41 pages. (Available online 25.01.2021).

Principal sources: SEISMO; HorizonScan; Safefood.ai.

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

Disclaimer: The presentation of articles reflects their media presence. The FSVO assumes no responsibility for the validity of the information obtained from the scanned media channels. The expressed views are not to be taken as an official opinion of the FSVO.



Seismo Info 01/2021



Source: mvcaspel, Fotolia

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

[FSVO website](#)

Additional subjects that are relevant to early detection can be found in our online database [ADURA](#).

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

Food trends

★★★★ **Histamines:** The presence of high levels of **histamine** and other **biogenic amines** in **cheese** is problematic from a food safety perspective and results in a severe reduction in product quality. Using experimental samples, Agroscope was able to identify ***Lactobacillus parabuchneri*** as the main cause of histamine formation in cheese. [IntDairyJournal](#), 10 pages. (Publication February 2021).

★★ **Essential oils:** According to an article published by France's national agency for food safety (ANSES), the **misuse** of food supplements containing tea tree, niaouli and cajepout essential oils **can pose risks**. [ANSES](#), 2 pages. (16.12.2020).

★★ **Lab-grown meat:** In Singapore, an Israeli firm has presented the prototype of a **beef steak grown in a laboratory** that can be produced in large quantities – and is set to cost the same as conventional beef. [FoodAktuell](#), 1 page. (20.11.2020). A US company has also gained regulatory approval in Singapore to sell **chicken meat grown entirely in a lab**. [FoodSafetyNews](#), 2 pages. (03.12.2020).

★★ **3D-printed food:** Food engineers in Brazil and France have developed **gels based on modified starch** for use as “ink” to **make foods** using 3D printing technology. [EurekAlert!](#), 2 pages. (03.12.2020).

★★ **Soy milk:** The **by-product of soy milk production** is generally considered a **waste material**. This residue would be a rich source of nutrients and bioactive components; Australian researchers have described **this by-product's potential for use** as a food ingredient. [Taylor&FrancisOnline](#), 24 pages. (09.12.2020).

★ **Food trends:** Three publications address new food trends and innovations in the food sector. The first publication lists a number of recent innovations, such as **baby formula made with goat's milk** and using **marine collagen**. [FoodNavigator](#). (01.12.2020). The second reveals the **five global trends** that the authors believe will transform the food and beverage industry in 2021. [FoodIndustryExecutive](#), 2 pages (11.11.2020). A third publication suggests that consumers will pick up their **pursuit of immunity boosts**, new plant-based options, global flavours and tech-enhanced foods after a tough year. [FoodDive](#), 4 pages (04.01.2021).

★ **Veganism:** A study carried out by the German Federal Institute for Risk Assessment (BfR) shows **differences between vegan and mixed diets** in terms of nutrient intake. While vitamin B12 intake is sufficient in the different diets, **iodine intake is a matter of concern**. [EurekAlert!](#), 1 page. (10.11.2020). [DeutschesÄrzteblatt](#) (2020). Original publication: [BfR](#). Another study by researchers from the Technical University of Denmark (DTU) documents that **the potential for health risk** cannot be ruled out if meat and dairy products are replaced with **soy-based alternatives** in children's diets. [FoodNavigator](#), 2 pages. (02.12.2020).

Unusual outbreaks

★★★ **Aeromonas spp.:** The occurrence, diversity and temperature-dependent growth of *Aeromonas* spp. have been determined in samples of **pre-cut, ready-to-eat lettuce** from retail stores in Norway. The overall **hygienic quality** of the products was **unsatisfactory**: *Aeromonas* spp. were detected in 52% of the samples; refrigeration did not prevent their growth during storage. [IntJFoodMicrobiol](#), 10 pages. (16.12.2020).

★★ **Listeria:** Three European countries have recorded *Listeria* infections with **fish** being investigated as the source. Germany has reported **30 infections** and, since November, two people in Austria and one person in Denmark have contracted the same strain of listeriosis. [FoodSafetyNews](#), 2 pages. (08.12.2020). Another multi-country listeriosis outbreak was associated with **frozen sweetcorn produced in Hungary**. 12 cases were detected in the United Kingdom between 2015 and 2018. Contaminated sweetcorn was recovered from the freezer of a further case in 2019. At the importer, 44% of sweetcorn were contaminated, 6 strains were recovered. [IntJFoodMicrobiology](#), 9 pages. (02.01.2021).

★ **Norovirus:** More than 150 students and staff at a school in Belgium fell ill during an **outbreak of norovirus** earlier this month. The Belgian Federal Agency for the Safety of the Food Chain (FASFC) reported that the food poisoning was caused by **crudités**, which are mixed raw vegetables. [FoodSafetyNews](#), 1 page. (22.12.2020).

Food safety

★★★ **Microplastics:** Researchers from the University of Bayreuth investigated the **microplastic load of four mussel species** which are often sold in supermarkets in twelve countries. All the samples analysed contained microplastic particles, and the researchers detected up to **nine different types of plastic**. [EurekAlert!](#), 1 page. (17.12.2020). Original publication: [EnvironmentalPollution](#).

★★★ **Warnings and recalls in Switzerland:** The Federal Food Safety and Veterinary Office (FSVO) has published a **report on its public warnings and recalls between 2017 and 2019**. During the past five years, the country has seen food recall alerts and public warnings **grow steadily**. [FoodSafetyNews](#), 1 page. (03.01.2021). Original publication: [FSVO](#).

★★★ **Protozoa in fish:** A new study evaluates the potential risk of three zoonotic protozoa, *Cryptosporidium* spp., *Giardia duodenalis* and *Toxoplasma gondii*, from **fish** consumption. All these species have been found in both marine and freshwater fishes, which indicates that fish could be a **new source of infection** for people. [MDPI](#), 21 pages. (21.12.2020).

★★ **Burden of disease:** Each year, the Dutch National Institute for Public Health and the Environment (RIVM) investigates **how many people become sick or die** from 14 pathogens. This is the “burden of disease” and is expressed in Disability Adjusted Life Years (DALYs). In 2019, **foodborne disease in the Netherlands** accounted for 4,200 of the 11,000 DALYs per year, and EUR 174 million of the EUR 423 million of associated costs. [FoodSafetyNews](#), 1 page. (04.01.2021). Original publication: [RIVM](#).

★ **Trichinella spp. and Taenia saginata:** Experts from the Food and Agriculture Organization of the United Nations (FAO) and World Health Organization (WHO) have helped develop **risk-based approaches** to control two **parasites in meat**, *Trichinella* spp. and *Taenia saginata*. [FoodSafetyNews](#), 2 pages. (07.01.2021). Original publication: [FAO](#).

Food fraud

★★★ **Whisky:** Spanish authorities have uncovered what they believe to be **one of the largest criminal networks** for the production and illegal distribution of whisky. The **fraud** had the potential to be worth more than EUR 800,000 and cause damage to the counterfeited whisky brand of almost **EUR 4 million**. [FoodSafetyNews](#), 1 page. (16.12.2020).

★★★ **Honey:** In **India**, the Centre for Science and Environment (CSE) is reporting **adulteration in honey** sold by major brands in the country. Investigations have found that the adulteration techniques were sophisticated and designed to **bypass the purity and quality standards** laid down by the Food Safety and Standards Authority of India (FSSAI). [TribuneIndia](#), 2 pages. (21.12.2020). In the Philippines, the Department of Science and Technology of the Philippine Nuclear Research Institute has published a study revealing that **62 out of the 76** or 82% of **honey brands they tested** contained 95% **C4 sugar syrup**. [MSNNews](#), 1 page. (14.12.2020).

★★★ **COVID-19:** Researchers have investigated the **effect of the COVID-19 pandemic on food fraud vulnerability** and on food fraud data. [IFST](#), 10 pages. (21.12.2020).

★★ **Fish:** A study conducted by a team of researchers in Ghana has found **widespread chemical adulteration of fish** sold at landing sites, markets and in cold stores across the country. The study found that there was the presence of **formaldehyde** in the tested samples with some of them recording concentrations as high as 0.05 mg. [GraphicOnline](#), 2 pages. (08.12.2020).

★★ **Pistachios:** The Spanish Civil Guard (Guardia Civil), supported by the French Gendarmerie (Gendarmerie Nationale) and Europol have dismantled an **organised crime group** involved in the production, distribution and sale of **alleged organic** pistachios which did not meet required ecological standards. [Europol](#), 1 page. (18.12.2020).

★★ **Wine:** University of Adelaide (Australia) researchers have developed a new **method of authenticating wine** – a potential solution against the estimated billions of dollars’ worth of wine fraud globally. They were able to identify the geographical origins of wines originating from three wine regions of Australia and from Bordeaux with **100% accuracy** with a **novel technique of molecular fingerprinting** that analyses fluorescence of molecules. [EurekAlert!](#), 1 page. (05.11.2020). Original publication: [FoodChemistry](#).

Close up

★★★ **Recall of dangerous products:** Several **Swiss Federal Administration** services are joining forces to launch an application designed for recalling dangerous products. The “**RecallSwiss**” application informs its users about safety messages issued by the authorities. The “**Notification des produits dangereux**” system that enables consumers to report potentially dangerous products via an online process has been updated and simplified. [Federal Consumer Affairs Bureau](#), 1 page. (12.12.2020).

★★★ **Official controls:** The European Commission has published a **report describing the overall outcome of the national and Commission control activities** carried out in 2017 and 2018. These controls aim to ensure a high level of health protection and trust in the areas of food and feed law, animal health and welfare, plant health and plant protection products, organic farming and quality schemes. [EuropeanCommission](#), 22 pages. (24.11.2020).

★★★ **Legionellosis:** In **Switzerland**, the number of **Legionnaires’ disease cases has more than doubled since 2008**. The cause of this increase is not well understood. The impact of testing volumes and positivity rates on case numbers has been recognised well before the public discussion around the COVID-19 pandemic. Therefore, in 2017, the Federal Office of Public Health together with the Federal Food Safety and Veterinary Office had mandated a **study on the testing volume** for Legionnaires’ disease between 2007 and 2016. The **results** of the study are now available. [HSLU](#), 1 page. (23.12.2020). Original publication: [MDPI](#).

★★ **Labelling:** A Swedish start-up has developed **food labelling technology** that offers real-time monitoring of food quality to help **reduce waste** and alert consumers of spoiled food. [FoodNavigator](#), 1 page. (03.12.2020).

★★ **Early detection:** A new study by ESR, a New Zealand research institute, has found that **Internet searches**, calls to **Healthline** (a service offering medical advice over the telephone) and **school absenteeism** data could alert health officials to a disease outbreak **days ahead** of other systems. [Voxy.co.nz](#), 1 page. (15.12.2020).

★★ **Listeria:** A team of US researchers has developed a *Lactobacillus casei* **probiotic** to express the *Listeria* adhesion protein from a non-pathogenic *Listeria* (*L. innocua*) and a pathogenic *Listeria* (*L. monocytogenes*) on its surface. Trials in mice have shown that the probiotic colonises the intestine, reduces *L. monocytogenes* mucosal colonisation and systemic dissemination, and **protected the mice from lethal infections**. [NatureCommunications](#), 23 pages. (11.12.2020).

★★ **Norovirus:** An international research team is reporting a **new norovirus GII.4 variant**, GII.4 Hong Kong, with low-level circulation in four Eurasian countries since mid-2017. Amino acid substitutions in key residues on the virus capsid associated with the emergence of pandemic noroviruses suggest that **GII.4 Hong Kong has the potential to become the next pandemic variant**. [EmergingInfectiousDiseases](#), 5 pages. (01.2021).

★ **Shiga toxin-producing E. coli:** *E. coli* food poisoning is one of the worst food poisonings, causing bloody diarrhoea and kidney damage. But all this might be just an **unintended side effect**. According to the research of a team of US scientists, the toxin released by STEC seems intended to **damp the immune system**, not kill the host. Their findings might lead to **more effective treatments** for this disease. [ScienceDaily](#), 2 pages. (06.01.2021). Original publication: [ScienceAndImmunology](#).

Principal sources: SEISMO; HorizonScan; Safefood.ai.

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

Disclaimer: The presentation of articles reflects their media presence. The FSVO assumes no responsibility for the validity of the information obtained from the scanned media channels. The expressed views are not to be taken as an official opinion of the FSVO.