MARKET NEWS

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BETTER FOOD. BETTER HEALTH. BETTER WORLD.

CONTENTS

Focus on China

Domestic cold chain system to get traceability shot

The General Office of the State Council recently released a first of its kind five-year plan for the development of cold chain logistics, proposing a nationwide cold chain food traceability supervision system based on the existing traceability and management mechanism for imported cold chain foods.

From primary agricultural products such as vegetables, fruits, meat, eggs and aquatic products to processed foods, most cold chain foods are handled by the cold chain logistics industry. Which reduces waste and pollution.

China attaches great importance to cold chain food management. The traceability management system for imported cold chain food that became operational last year has been not only playing an important role in the fight against the COVID-19 pandemic, but also making important contributions to maintaining food safety.

Once the novel coronavirus is detected in some imported cold chain food, the traceability management system helps trace its source.

However considering that domestic cold chain foods have not been included in the traceability management system, the State Council has proposed that a cold chain logistics network connecting production and marketing, urban and rural areas, and domestic and international cold chain logistics be established by 2025.

The inclusion of both imported and domestic cold chain foods in the system will not only make consumers feel more confident about their quality but also strengthen supervision of cold chain foods and prevent the spread of diseases.

However, irrespective of whether cold chain foods are imported or produced at home, every link in the logistics chain, from food processing, storage and transportation to distribution and retail, should meet the traceability standards.

Since the supply of all cold chain foods involves many links, if the collection and management of traceability data in a link is incomplete or inaccurate, it could create problems for food safety management and epidemic prevention and control.

Hopefully, unified standards will be used to manage the nationwide cold-chain food traceability supervision system.

As for local governments, they should properly train and guide personnel, and strengthen supervision in order to prevent food safety scandals.

When both imported and domestic cold chain foods are put under the closed-loop management of a multi-layer, nationwide cold chain logistics traceability system, China's food safety and epidemic prevention and control will reach a new level.

International News

FDA Completes Review of a Notification Regarding a Health Claim Related to Peanut Allergies

The U.S. Food and Drug Administration has completed the review of a notification regarding specific health claims related to the introduction of certain foods to infants and the reduction in the risk of developing food allergies.

FDA has concluded that manufacturers may use the below-specified claims on the label and in labeling of any food product that qualifies for the claims. The claims are based on authoritative statements from the Dietary Guidelines for Americans, 2020-2025.

"If a baby has severe eczema, egg allergy or both, introducing age-appropriate, peanut-containing foods as early as 4 months may reduce the risk of developing a peanut allergy. Caregivers should check with the baby's healthcare provider before feeding the baby peanut-containing foods."

"For babies with an increased risk of peanut allergy (babies with severe eczema, egg allergy or both), introducing age-appropriate, peanut-containing foods as early as 4 months may reduce the risk of developing a peanut allergy. Caregivers should check with the baby's healthcare provider before feeding the baby peanut-containing foods."

These claims are in addition to the qualified health claim that the agency allowed in 2017 that links early peanut introduction and reduced risk of developing a peanut allergy.

Peanut allergy is one of the most common food allergies and, in the majority of individuals, it begins early in life and persists throughout life. The National Institute of Allergy and Infectious Diseases, part of the National Institutes of Health, has developed clinical recommendations to prevent the development of peanut allergy. The Addendum Guidelines for the Prevention of Peanut Allergy in the United States provides three guidelines for the early introduction of peanut-containing foods in infants, based on their level of risk for developing peanut allergy.

FDA Takes Steps to Facilitate the Export of Food under China's New Facility Registration Requirements – Decree 248

The FDA has provided the General Administration of Customs of China (GACC) lists of U.S. establishments that sought to be recommended for registration in China via the FDA's Export Listing Module (ELM). In its communication to GACC,

the FDA requested that the GACC register these establishments without delay so these establishments could continue to export their goods after January 1, 2022. FDA provided this information to minimize any disruption in trade.

At the same time, the U.S. government continues to engage with Chinese officials to express concern about the nature of the requirements and gain clarity about how China will apply the new requirements to U.S. products. In particular, the United States is continuing to seek confirmation that competent authority recommendation is not a requirement for U.S. facilities to register with China. Given the ongoing lack of clarity, the United States is continuing to press China for a delay in implementation of these Decrees by at least 18 months.

The FDA will continue to work with its federal partners and share additional information as it becomes available. We encourage U.S. establishments to contact GACC or their importers in China with questions about registration under Decree 248.

The FDA is asking establishments currently exporting certain food products to China to voluntarily submit information. We are making this request in response to new facility registration requirements from China. While China has not confirmed that collecting this information is a prerequisite for U.S. establishments to export to China, the FDA is making this request as a precaution against potential trade disruption. In April 2021, China's General Administration of Customs (GACC) announced new registration requirements that affect all overseas food manufacturers, processors, and storage facilities of food products exported to China. These requirements are described in China's Decree 248 and will be in effect on January 1, 2022.

Articles 7 and 8 of the Decree require the exporting countries' competent authorities to recommend registration of establishments involved in the export to China of certain food categories:

1. Meat and meat products
2. Aquatic products
3. Dairy products
4. Bird nests and bird nest products
5. Casings
6. Bee products
7. Eggs and egg products
8. Edible oils and fats
9. Stuffed wheaten products
10. Edible grains
11. Milled grain industry products and malt
12. Fresh and dehydrated vegetables and dried beans
13. Condiments
14. Nuts and seeds
15. Dried fruits
16. Unroasted coffee beans and cocoa beans
17. Foods for special dietary purposes

18. Functional food

For products that do not fall within the 18 product categories listed in Article 7 and above, the GACC launched a system to facilitate self-registration as indicated in Article 9 of Decree 248. The USDA's Foreign Agricultural Service (FAS) has published information on the self-registration process.

According to the GACC, it will continue to recognize existing registrations for establishments that export meat and meat products, aquatic products, dairy and infant formula products and bird nests and bird nest products. The FDA currently facilitates the registration of U.S. firms for seafood, dairy, and infant formula products by providing the GACC with documents that identify certified establishments and products that meet applicable U.S. requirements. U.S. firms that have applied in the FDA's Export Listing Module (ELM) and are currently listed as certified by the GACC to export seafood, dairy, and infant formula products to China do not need to take any action at this time related to registration.

For all other categories of food, the U.S. government interprets the Decree to provide that these products are covered by the existing bilateral agreements with China, such as the Phase One Economic and Trade Agreement, and other bilateral facility registration arrangements. USTR has asked the GACC to confirm its understanding that U.S. establishments that export all other categories of products may self-register. To date the GACC has not confirmed this interpretation of Decree 248 and has failed to provide adequate further guidance for the United States. While the United States continues to engage with China at multiple levels to ensure minimal new requirements for the United States, the FDA is taking proactive steps to maintain current market access for FDA-regulated firms in the United States that export food to China.

IMPORTANT DATES FOR U.S. ESTABLISHMENTS

As the U.S competent authority for many of the product categories named in Article 7 of Decree 248, the FDA is collecting information in the Export Listing Module (ELM) from U.S. firms that may be needed to facilitate the registration process before the new requirements go into effect on January 1, 2022.

Beginning on December 6, 2021, U.S. establishments that currently produce or store FDA-regulated products for export to China that fall into the product categories 5-18 listed above may submit an application via the FDA's Export Listing Module (ELM), providing information for products they currently export to China to allow the FDA to facilitate registration of these establishments with China. Step-by-step instructions for using the ELM are available on the FDA's website.

To ensure that the FDA has the relevant establishment information before the end of the year, any U.S. establishment currently exporting food products in categories 5-18 to China should submit applications to the ELM by December 17, 2021. In addition to meeting U.S. requirements, firms exporting to China are responsible for meeting relevant China regulations and requirements.

Please note that the FDA does not intend to provide a declaration of conformity or other competent authority statement directly to U.S. establishments. In the event it is needed for registration for China, the FDA may provide an attestation directly to GACC for U.S. establishments and their products that comply with applicable U.S. requirements in order to facilitate registration.

For more details on China's requirements, additional information on the U.S. competent authority for certain products that are under the FDA's authority or the USDA's Food Safety and Inspection Service's authority, or both and for

step-by-step instructions on how to apply to the ELM, visit Food Export Library and Online Applications for Export Lists.

EU changes rate of controls for nuts from United States

Checks on peanuts from the United States are to be increased but controls on pistachios have been relaxed in Europe.

The European Commission has updated regulation on the temporary increase of official controls and emergency measures covering the entry into the EU of certain goods from some non-EU countries.

Because of non-compliances with EU requirements for contamination by aflatoxins, the frequency of identity and physical checks on groundnuts from the United States has been increased from 10 percent to 20 percent beginning this past week.

Information on pistachios indicates a satisfactory degree of compliance with the relevant EU rules for aflatoxin so the higher level of official controls is no longer justified. The rate of checks had been at 10 percent.

Informed by RASFF and national authorities

Changes are based on the occurrence and relevance of food incidents reported through the Rapid Alert System for Food and Feed (RASFF) portal and information from official controls performed by member states on food and feed of non-animal origin.

The Commission reviews the lists about every six months to take into account new information on risks and non-compliance.

For lemons from Turkey and groundnuts from Brazil, the data indicates the emergence of new risks to human health, from possible contamination by pesticide residues, requiring an increased level of official controls to 20 percent of identity and physical checks.

Ethylene oxide has been added to list of substances looked for in okra from India plus checks for pesticide residues on this product have been increased to 20 percent.

Salmonella controls on sesame seeds from Sudan have risen to 50 percent because of the high amount of non-compliances detected by EU countries.

The frequency of checks on oranges, mandarins, clementines, wilkings and similar citrus hybrids, and certain peppers from Turkey has gone up to 20 percent because of pesticide residue issues. There has also been an increase, to 50 percent, for identity and physical checks on vine leaves from Turkey.

The rate of controls on jackfruit from Malaysia and some peppers from Uganda

has been set at 50 percent because of pesticide residue findings.

Revised checks on other products and countries

For hazelnuts and products from hazelnuts from the country of Georgia, information indicates a good trend of compliance with EU requirements in regard to contamination by aflatoxins so the frequency of checks has been decreased to 20 percent.

Black pepper from Brazil is still undergoing checks for Salmonella at a rate of 50 percent as are sesame seeds from Nigeria.

Sesame seeds from Ethiopia have been subject to an increased level of official controls because of the risk of contamination by Salmonella since January 2019. In addition to these controls, all consignments will have to be accompanied by an official certificate stating that all results of sampling and analysis show the absence of Salmonella in 25-gram samples.

Some peppers from Sri Lanka have had stricter checks because of aflatoxin since July 2017. All consignments will need to have an official certificate showing they have been sampled and analyzed for aflatoxins and results demonstrate the relevant maximum levels have not been exceeded.

Consignments of sesame seeds from Ethiopia and certain peppers from Sri Lanka ,which are not accompanied by an official certificate and the revised demands for sampling and analysis, will still be accepted into the EU until Jan. 13, 2022.

EU survey on herbs and spices finds fraud, dyes, extraneous material, allergen risks

A survey on herb and spice authenticity in Europe has found potential adulteration, illegal dyes and allergens.

The work was overseen by DG SANTE, the European Commission's health and safety body, and carried out in 21 EU member states, Switzerland and Norway.

Technical support came from the Joint Research Centre, an agency that provides scientific advice to the EU Commission, which performed nearly 10,000 analyses on 1,885 samples, using a range of analytical techniques to assess the authenticity of six herbs and spices. These were cumin, curcuma (turmeric), oregano, paprika/chili, pepper and saffron.

The JRC found the rate of suspicious samples was 17 percent, or 329 of the samples analyzed, which is less than what has been reported in the literature or

by national food control agencies.

The European Commission called on operators to create a plan to remedy a situation that is detrimental to consumers' interests and health, but also to the herbs and spices industry and its fair operators. The agency also invited national authorities to increase official controls in the sector to deter bad practices and sanction fraudsters.

Dyes and heavy metals

In 25 of 1,340 analyzed spice samples, non-authorized dyes were detected. In 316 curcuma samples, Sudan I was present in one sample and Tartrazine in two. For paprika and chili, 10 non-permitted dyes including Sudan I, Allura Red, Bixin, Azorubin and Sunset Yellow were found. Out of 141 saffron samples, 12 contained either Sudan I, Sunset Yellow, Azorubine, Acid Yellow 3, Tartrazine, Carminic acid, Allura Red or Auramine O.

In one curcuma sample substantial amounts of lead and chromium was found. Lead chromate has been reported as an adulterant to enhance the bright yellow color of curcuma. In two cumin, 45 oregano, and four pepper samples, copper compounds above the maximum residue limit set by EU regulation were identified.

The percentage of crushed or ground samples at risk of adulteration were 17 percent for pepper, 14 percent for cumin, 11 percent for curcuma and saffron and 6 percent for paprika/chili. Oregano was the most vulnerable with 48 percent of 295 samples contaminated, mostly by olive leaves. Authenticity and purity was assessed against relevant ISO standards.

The EU produces about 100,000 tons of herbs and spices per year, and imports annually three times this amount from Asia, Africa, Latin America and the Caribbean.

Fraud may happen at any stage of the process from production, the shipping and processing until the product reaches the market. Samples came from different places including retailers, processors, importers and online sellers.

Vulnerabilities include the length of the supply chain, fraud history, seasonality and availability of the crop, weather, natural disasters, cultural and geo-political events, economic situation, enforcement of food law, prevalence of corruption, and advances in technology to mask fraud. Among the most common issues are ingredients, additives, dyes or any other constituent not approved for use.

Fraud or natural contamination?

Some cumin samples contained coriander, mustard, linseed or pumpkin seed above the maximum level of extraneous substances. In nine samples DNA of mustard, which is a food allergen, was detected. In 24 samples of curcuma, DNA of non-declared plant material, mostly paprika/chili and starch containing species such as maize, rice, and other cereals were detected in amounts greater than 2 percent, which is the maximum allowed amount of extraneous material. Many oregano samples had low levels of thyme, peppermint and sage.

In paprika/chili, maize, carrot, tomato and sunflower seed was found in excess of 1 percent. Nine pepper samples contained mustard seed, which is an allergen. Some had starch containing fillers such as rice, buckwheat and other cereals. Samples also tested positive for non-declared other spices such as paprika, garlic, cumin, fennel and coriander above 2.5 percent, the maximum for extraneous matter in the ISO specification.

Testing focused on detecting substitution of the named herb or spice by another botanical material, the addition of fillers such as starch, flour, dust or chalk and

enhancement of color by a non-authorized additive like a synthetic dye. It did not cover description of origin, whether they were conventional or organic or had undergone treatments like ionizing radiation.

DNA-based methods were partly used but the Institute for Global Food Security (IGFS) at Queen's University Belfast said such techniques have shortcomings when applied to herbs and spices. The choice of method is important to distinguish between fraudulent adulteration and low level naturally occurring cross-contamination.

Other issues on the radar of EU countries include use of water retention agents and mis-declared glazing of frozen fish fillets; fraud in fruit juices such as addition of water and sugar, presence of non-declared fruit juices, infringement of labeling rules on the use of flavorings, colorings and preservatives; adulteration of honey with sugars and the illegal sale of plant protection products through e-commerce.

Laboratory accreditation required by FSMA finally becoming a reality

A decade after the Food Safety Modernization Act (FSMA) was signed into law, the FDA's final rule on Laboratory Accreditation for Analyses of Foods (LAAF) for a laboratory accreditation program for the testing of food in certain circumstances is becoming a reality.

Under the LAAF program, the Food and Drug Administration will recognize accreditation bodies (ABs) that will accredit laboratories to the standards established in the final rule, referred to as LAAF-accredited laboratories.

Earlier this week, FDA announced that the final rule specifies eligibility requirements that ABs and laboratories wishing to participate in the program will need to satisfy, as well as procedures for how the FDA will manage and oversee the program. In certain circumstances, owners and consignees will be required to use a LAAF-accredited laboratory for food testing.

The FDA will maintain an online public registry listing recognized accredited bodies and LAAF-accredited laboratories.

The establishment of the LAAF program is intended to improve the accuracy and reliability of certain food testing through the uniformity of standards and enhanced FDA oversight of participating laboratories.

According to FDA, the LAAF final rule applies to accreditation bodies and food testing laboratories that wish to participate in the program. Participation is entirely voluntary. In certain circumstances, owners and consignees will be required to use LAAF-accredited laboratories to conduct food testing.

Under the rule, food testing, including environmental testing, is only required to

be conducted by a LAAF-accredited laboratory under certain specified circumstances. For the purposes of the rule, "food" has the same definition as in section 201(f) of the Federal Food, Drug, and Cosmetic Act. It includes articles used for food or drink for man or other animals, except that food does not include pesticides (as defined in 7 U.S.C. 136(u)).

After the LAAF final rule is fully implemented, owners and consignees will be required to use a LAAF-accredited laboratory for food testing:

The FDA's leaders say the agency will take "a stepwise" approach to the implementation of the LAAF program. The agency intends to announce in early 2022 what accreditation bodies may apply for recognition. Once the FDA has recognized a sufficient number of accreditation bodies, the agency will announce that laboratories may apply to the recognized accreditation bodies for LAAF-accreditation.

When there is sufficient LAAF-accredited laboratory capacity for the food testing covered by the final rule, the agency will publish a document in the Federal Register giving owners and consignees six months' notice that they will be required to use a LAAF-accredited laboratory for such food testing. The agency may issue more than one Federal Register document as LAAF-accredited laboratory capacity is attained for various types of food testing described in the final rule.

FDA outlines the structure of the LAAF program here.

Meanwhile, the EAS Consulting Group reports that the LAAF program will:

- support removal of a food from an import alert through successful consecutive testing requirements;
- support admission of an imported food detained at the border because it is or appears to be in violation of the Federal Food, Drug, and Cosmetic Act;
- be required by existing FDA food safety regulations, when applied to address an identified or suspected food safety problem (i.e., certain tests of shell eggs, sprouts, and bottled drinking water);
- be required by a directed food laboratory order, a new procedure being implemented in this final rule that will allow the FDA to require use of a LAAF-accredited laboratory to address an identified or suspected food safety problem in certain, rare circumstances; and
- conduct in connection with certain administrative processes such as testing submitted in connection with an appeal of an administrative detention order

UK local authorities still face uncertainty as COVID pandemic continues

There are signs that local authorities are getting back on track with food work amid the pandemic but there is still large uncertainty, according to the Food

Standards Agency (FSA).

A report at the FSA's business committee meeting this past week gave an update on how authorities are managing COVID-19 tasks with food inspections as part of a plan agreed to in May.

The plan, which covers July 2021 to March 2023, contains guidance and advice for local authorities in England, Wales, and Northern Ireland on conducting official food controls.

In March 2021, there was a decline in the percentage of planned interventions. For food hygiene this dropped from 85.7 percent to 27 percent and there was a drop from 39.7 percent to 19 percent for food standards. The percentage of unrated establishments awaiting a first inspection for food hygiene increased from 5.5 percent to 12.7 percent across the three countries. A total of 54 percent of the resources for food hygiene and 43 percent for food standards were redeployed to other tasks.

Data from October shows resources are returning. For food hygiene teams, levels were back up to 81 percent in England, 64 percent in Wales, and 76 percent in Northern Ireland and for food standards, figures were slightly higher for each country.

However, 20,820 new businesses were still awaiting inspections for food hygiene and 23,215 for food standards.

Inspections taking longer as standards slip

In June 2020, 461 establishments received a Food Hygiene Rating Scheme (FHRS) score. In September 2021, 13,599 sites got a new hygiene rating, compared to the pre-pandemic monthly average of 16,687 in 2019-2020 across England, Wales and Northern Ireland.

Local authorities are reporting cases where standards in businesses have dropped and formal enforcement is required to ensure they are brought into compliance. The time required to do a food hygiene inspection has also increased because of falling standards. Checking compliance with the new requirement to display full ingredient and allergen labeling information on food that is pre-packed for direct sale is also adding to inspection times.

More than 40 responses for food hygiene and 27 for food standards reported the local authority had been unable to meet all expectations in the first phase of the plan. Many pointed to issues with sampling because of a lack of resources.

The next milestone is in March 2022. For food hygiene, 28 councils indicated they see issues with delivering all due Category A food hygiene interventions. Other expectations for food hygiene and food standards in the plan were also identified as a problem.

A new model for food standards is on target for implementation in 2023-2024 and a revised approach to collect, analyze and report data on official food and feed controls is planned for April 2023.

Uncomfortable inspection delays

Speaking at a recent Chartered Institute of Environmental Health (CIEH) conference, Emily Miles, FSA chief executive, said it was right that COVID-19 had been a priority for local authorities but food inspections can't be delayed indefinitely.

"The FSA's own internal research has linked higher FHRS ratings to lower levels of microbes found in food businesses, ultimately lowering the risk to consumers

of foodborne illness when eating food from higher rated premises. Many inspections and ratings have been delayed, and this makes the FSA feel uncomfortable on behalf of consumers," she said.

Miles also spoke about opportunities, challenges and emerging risks.

"Like raw drinking milk, or (eating) rare burgers, will some types of novel food need extra attention from food handlers to make sure it is safe? Or will we need to put additional information on labels to discourage vulnerable consumers from eating it?" she said.

"A greater choice of food online presents the risk of a lawless marketplace with platforms hosting dubious sellers refusing to take their responsibilities seriously. It's not always very easy for a local authority environmental health officer to get an audience with a global multinational social media company about a product or a seller that's on their platform."

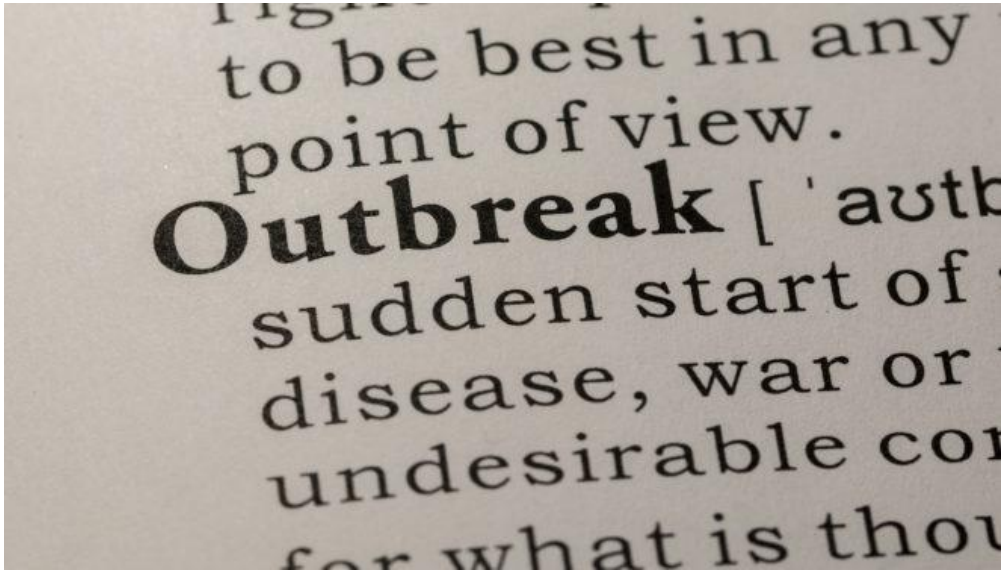
Salmonella behind a quarter of EU outbreaks in 2020 with 20,000 sickened overall

Salmonella caused almost a quarter of foodborne outbreaks in Europe in 2020, according to a report.

The main sources of salmonellosis outbreaks were eggs, egg products and pig meat. Norovirus in crustaceans, shellfish, mollusks and products containing them and Listeria monocytogenes in fish and fish products were other agents and food pairs of concern.

A total of 3,086 foodborne outbreaks were reported in 2020 – a 47 percent decrease from 2019 – and 20,017 cases – a 61.3 percent decrease. There were also 1,675 hospitalizations and 34 deaths this past year compared to 4,298 and 60 in 2019. The agent was unknown for more than 1,200 outbreaks that affected 6,139 people. These were primarily notified by Belgium and Netherlands.

The number of outbreaks in Belgium, France, Germany, the Netherlands and Slovakia made up more than three-quarters of the total. France had more than 1,000, Netherlands had 559 and Belgium 331.



Differing COVID-19 impact

Lower figures are mainly due to the COVID-19 pandemic leading to reduced exposure of people to contaminated food and a higher under-reporting of outbreaks. Withdrawal of the United Kingdom from the EU contributed only marginally to the decrease, found the European Food Safety Authority (EFSA) and European Centre for Disease Prevention and Control (ECDC) report.

The fall did not affect all pathogens equally. Outbreaks caused by agents associated with severe clinical conditions such as botulism, listeriosis,

trichinellosis and E. coli declined less than those from other agents or not at all. Outbreaks due to norovirus and Hepatitis A dropped sharply in 2020 to 130 and seven, respectively, from 458 and 20 in 2019.

General outbreaks were more frequent than household outbreaks. However, compared with 2019, general outbreaks decreased to a greater extent than household ones.

Another 57 outbreaks, 1,496 illnesses, 155 hospitalizations and 14 deaths were reported by seven non-member states in 2020. The UK had 30 outbreaks affecting 1,148 people with four deaths.

One outbreak caused by table eggs contaminated with Salmonella Enteritidis was reported in the UK as a continuation from the previous year involving 59 cases. Two deaths were recorded in an incident linked to smoked salmon caused by Listeria monocytogenes. Two milk-borne outbreaks caused by Campylobacter and one by STEC O157 were reported as well as an outbreak of Clostridium perfringens linked to spreadable cheese.

Campylobacter and Salmonella outbreaks

Campylobacter outbreaks were reported by 17 member states. In total, 317 outbreaks included 1,319 illnesses, 112 hospitalizations and no deaths. Eleven had strong evidence and 306 had weak evidence. The most common food vehicles for the strong-evidence outbreaks were broiler meat and raw milk, as in previous years. In 2019, 319 outbreaks were recorded with 1,254 cases.

Two large outbreaks caused by Campylobacter jejuni were reported by Denmark and Sweden involving 161 cases with 33 hospitalizations and 150 cases, respectively. Contamination of milk at a processing plant was implicated in the first event, while the other was caused by chicken meat.

In total, 694 foodborne outbreaks of Salmonella were reported by 22 nations, causing 3,686 illnesses, 812 hospitalizations and seven deaths. More than half of them were caused by Salmonella Enteritidis. The three food vehicles mainly involved in strong-evidence outbreaks were eggs and egg products, pig meat and products and bakery products. In 2019, 1,284 outbreaks caused 10,240 illnesses.

Salmonella Muenchen was responsible for an outbreak in Germany with 161 cases due to contamination of coconut pieces or flakes. In Italy, Salmonella Enteritidis was behind an outbreak linked to cheese that caused 86 cases, eight hospitalizations and one death. An outbreak in Hungary linked to sweets and chocolate involved 78 cases and seven hospitalizations.

The role of poultry products as a risk for Salmonella infections was confirmed by a multi-country outbreak due to Salmonella Enteritidis affecting 193 people in eight EU countries and the United Kingdom from 2018 to 2020.

Listeria behind half of deaths in outbreaks

Listeria monocytogenes caused 16 foodborne outbreaks involving seven countries and 120 cases, 83 hospitalizations and 17 deaths. Overall, 34 people were hospitalized in Germany; 24 in the Netherlands; 14 in Finland; seven in Italy; and two in both France and Austria. In 2019, 21 outbreaks led to 349 illnesses.

Nine outbreaks were reported with strong evidence and eight with weak evidence. Six strong-evidence outbreaks were caused by fish and fishery products with two each in Netherlands and Denmark and one each in Austria and Germany; two were caused by meat and meat products in Finland; and one by cheese in the Netherlands. An outbreak in Switzerland caused the most deaths ever detected in a single event in Europe with 10 and was traced to

cheese.

Nine countries reported 34 STEC outbreaks, 208 cases, 30 hospitalizations and one death in 2020. In 2019, 42 outbreaks affected 273 people.

STEC O157, O145 and O26 were identified in three, two and one outbreak, respectively. Almost half of them were recorded in Ireland. Six O157 and one O145 outbreak were reported by the UK.

Sources in the five strong-evidence outbreaks were water twice, and meat and meat products, dairy products other than cheese and cheeses made from cows' milk all once.

Toxins, viruses and parasites

One brucellosis outbreak was reported by Austria because of Brucella melitensis in sheep meat products, affecting two people from the same household, who contracted the infection abroad. Both were hospitalized.

There were five strong-evidence Trichinella outbreaks and one with weak-evidence leading to 119 illnesses, 13 people hospitalized and no deaths. The biggest was in Italy with 79 cases. In 2019, five outbreaks sickened 44 people.

In the strong-evidence outbreaks, the food vehicles were fresh raw sausages from wild boar meat, pig meat and products thereof, other or mixed red meat products, meat and meat products, and fresh pig meat. Two strong-evidence outbreaks were reported by Serbia with eight confirmed cases, seven hospitalizations and no deaths.

In Czech Republic, one outbreak caused 131 cases of Hepatitis A with 91 needing hospitalization. Another large outbreak in Germany involved 41 cases with nine hospitalizations. No information on the implicated vehicle was available for either event. There were five outbreaks of tick-borne encephalitis involving 12 patients, all requiring hospitalization. Raw sheep's milk and/or raw goat's milk was the vehicle in all of them.

Two outbreaks of Anisakis affected six people, three of Cryptosporidium sickened 34 and a Enterocytozoon bieneusi outbreak affected 77 in Denmark. Yersinia was behind 16 outbreaks with 236 illnesses. Shigella caused five outbreaks with 58 patients and Vibrio parahaemolyticus had four outbreaks with 56 cases.

Bacillus cereus was linked to 71 outbreaks with 835 sick, Clostridium botulism to nine incidents with 34 cases, Clostridium perfringens in 32 outbreaks with 682 illnesses, and Staphylococcus aureus in 43 outbreaks with 402 patients.

A total of 43 histamine and Scombrotoxin outbreaks affected 183 people and 23 marine biotoxin incidents sickened 120. In nine outbreaks, food poisoning was caused by ciguatoxin, the causative agent of Ciguatera fish poisoning. Three outbreaks of lectin poisoning were reported by Denmark, involving 55 people.

E. coli outbreak involving thousands in Japan traced to red seaweed

E. coli was behind a large-scale food poisoning outbreak that involved about 3,000 school students and staff in Japan this past year, according to a study.

The investigation found the 2020 outbreak was caused by red seaweed used in a salad contaminated with E. coli O7:H4. The seaweed had been imported in 2017.

E. coli O7:H4 carrying the astA gene for enteroaggregative E. coli heat-stable enterotoxin 1 (EAST1) was detected in fecal specimens from patients and in the red seaweed. Food poisoning cases from E. coli carrying astA for EAST1 usually show relatively mild symptoms, according to the study published in the journal

Epidemiology and Infection.

In late June 2020, elementary and junior high school students in Yashio, Saitama, came down with gastroenteritis symptoms such as diarrhea and abdominal pain. Patients were in all 15 public elementary and junior high schools in Yashio and the Yashio Board of Education jurisdiction. A school lunch from a private meal supplier was the common foodstuff eaten by all patients.

As many as 6,732 students, teachers and other staff had consumed the school lunch, and 2,958 of them fell sick. The major symptoms were diarrhea, abdominal pain and fever.

Examining patients and food samples

An investigation involved collection of fecal specimens from 19 patients in eight of 15 schools and the Yashio Board of Education who were not receiving antibiotics. Also, 27 food samples from lunch, served on June 24, 25 and 26, stored by meal type at the Yashio Board of Education and the private school meal supplier's facility, and nine fecal specimens from food preparation staff were taken. Four swab samples of the kitchen facilities were collected.

Direct examination of culture plates from 18 of 19 patients' samples and five of nine food workers' samples showed growth of lactose-fermenting colonies that appeared to be E. coli. Colonies were confirmed for the presence of virulence-associated genes for diarrheagenic E. coli. Fourteen isolates from 14 patients were identified as E. coli O7:H4.

The 27 stored food samples and four swab samples were tested for E. coli O7:H4 carrying astA and it was detected in two seaweed salad samples served on June 26.

The seaweed salad was made from six kinds of seaweed rehydrated with water and boiled vegetables with dressing. Coliforms were found in the red seaweed by the manufacturer during self-inspection. E. coli carrying astA was then detected in the red seaweed, which had been imported in 2017.

Coliforms were not detected during an import inspection nor when it was sold to the manufacturer. No other complaints about the same lot of seaweed have been reported. So, the source of the E. coli contamination of red seaweed could not be identified.

Researchers said it was the first report of large-scale food poisoning caused by E. coli O7:H4.

"Since this particular outbreak was attributed to seaweed, it is recommended that marine products be carefully monitored for contamination."

Danish pork main source of Salmonella infections

Danish pork replaced travel abroad as the main source of Salmonella infections in 2020, according to figures from the Technical University of Denmark's National Food Institute.

Danes travelled far less this past year because of COVID-19 restrictions, so going abroad was linked to just less than 20 percent of 614 Salmonella cases. Normally, about half of registered infections are travel related.

Danish pork was estimated to have caused 22 percent of illnesses followed by imported pork and duck meat with 9 percent and 6 percent of cases respectively.

A data management issue prevented the statistics being published earlier this year at the same time as the 2020 zoonoses report.

In total, 3,742 Campylobacter cases were recorded in 2020 which was 31 percent fewer than the previous year. Salmonella infections decreased by 45 percent to 614 followed by 448 Shiga toxin-producing E. coli (STEC) infections and 413 Yersinia enterocolitica infections. One reason for the decline was people were less likely to visit the doctor with minor illness symptoms during lockdowns.

Pork increase impacted by other factors

A direct comparison of figures shows a large increase in the number of Salmonella cases caused by Danish pork from 8 percent in 2019 to 22 percent in 2020.

However, the primary reason for this is the drop in travel related cases from 419 to 111 between 2019 and 2020. The actual rise in cases attributed to Danish pork is much smaller.

Of 562 Salmonella isolates from the 614 infections, 462 cases were sporadic and 100 were associated with 10 outbreaks, including 25 as part of an international event. Sporadic cases included 111 travel related, 220 domestic and 141 with unknown travel history.

Overall, 140 of the 562 cases were attributed to Danish produced food, 94 to imported food and 127 to unknown sources.

A total of 35 outbreaks were registered in 2020 compared with 51 in the previous year. The number of people affected was 1,190 with an average of 34 per outbreak and a range of two to 200. More than 1,900 people were sick in 2019.

The number of Salmonella outbreaks was stable with 10 compared to nine in 2019. Five were caused by Salmonella Typhimurium or the monophasic variant but sources were not found.

The largest national outbreak was because of Salmonella Strathcona with 25 cases from May to July. Imported tomatoes were suspected to be the cause. An outbreak of Salmonella Kottbus occurred in a restaurant in Copenhagen in June. Of 36 patients, 14 were lab-confirmed. Pea purée was the likely source because of cross-contamination and inadequate temperature control on a hot summer day.

UK finds rise in non-compliant products from the U.S.

Authorities in the United Kingdom have issued a warning because of a rise in the number of non-compliant food and drink products being imported from countries including the United States.

The problem was identified by the Food Standards Agency (FSA) through import surveillance sampling and the occurrence of incidents.

Local authorities have been asked to raise the issue with importers of products from the United States, as they may not be aware of differences in the laws between the two countries.

According to European regulation retained in the UK after Brexit, all food additives in products must be authorized for use in the relevant food category.

Non-compliance has been mainly related to using food additives in products they are not authorized for use in, or their presence at levels that exceed the permitted maximum limit, as well as labeling deficiencies.

Problem examples

Examples include the color Erythrosine, shown on products from the United States as Red 3, which is only permitted for use in cocktail cherries, being found in breakfast cereals, baking products and confectionery.

Foods containing the Southampton colors Sunset yellow FCF; quinoline yellow; carmoisine; Allura Red; tartrazine; and ponceau 4R above authorized levels or lacking the warning: "May have an adverse effect on activity and attention in children."

Calcium disodium EDTA and Erythorbic acid are permitted additives for some foods but they are not allowed in drinks while some beverages have been found to contain Brominated Vegetable oil (BVO).

Drinks labeled as having BVO, EDTA or Erythorbic acid, and products other than cocktail cherries with Erythrosine or Red 3 should not be imported to the UK.

Food businesses importing and selling these products are responsible for ensuring anything they place on the market meets the legal requirements. Importers were advised to only source products that are compliant with food additives legislation.

Adam Hardgrave, FSA head of food additives, flavorings and food contact materials, said: "We have provided port health authorities with additional guidance on non-approved food additives and incorrect labels found in imported food and drink. It is food business operators' responsibility to ensure imported products are complaint with the food additive regulation and if they are not, they will be removed from the market."

FDA Proposes Changes to Agricultural Water Requirements in the Produce Safety Rule

Today, the U.S. Food and Drug Administration published a proposed rule that would revise subpart E of the FDA Food Safety Modernization Act (FSMA) Produce Safety Rule to change certain pre-harvest agricultural water requirements for covered produce other than sprouts. Under this proposal, farms would be required to conduct annual systems-based agricultural water assessments to determine and guide appropriate measures to minimize potential risks associated with pre-harvest agricultural water. The assessment would include an evaluation of the water system, agricultural water use practices, crop characteristics, environmental conditions, potential impacts on source water by activities conducted on adjacent and nearby land, and other relevant factors, such as the results of optional testing.

In 2015, the FDA published the final Produce Safety Rule, establishing science- and risk-based standards for the safe growing, harvesting, packing, and holding of produce grown for human consumption. During outreach and education efforts on the final rule, the FDA heard from a variety of stakeholders that certain pre-harvest microbial quality criteria and testing requirements were too difficult to understand, interpret, and implement.

After additional stakeholder engagement on these agricultural water requirements, the FDA extended the compliance dates for the agricultural water requirements for covered produce (other than sprouts) to allow time for the agency to consider how best to address stakeholder concerns while protecting public health. Sprouts are subject to different pre-harvest agricultural water testing requirements that are already in effect and are not impacted by this proposed rule.

The proposal announced today would replace the pre-harvest microbial water quality criteria and testing requirements with requirements for a systems-based pre-harvest agricultural water assessment for covered produce other than sprouts. This approach was developed following hundreds of farm visits and meetings with stakeholders, including an Agricultural Water Summit hosted by the Produce Safety Alliance. In addition, this proposal reflects findings from several recent produce outbreak investigations that offered additional insights into potential routes of contamination. The requirements described in this proposal are intended to be workable across produce farms of all sizes, both

domestic and foreign, recognizing the wide variety of water systems, uses, and practices. They also are designed to be adaptable to future advancements in agricultural water quality science and technology.

If finalized, farms covered by the Produce Safety Rule would be required to conduct an assessment of their pre-harvest agricultural water annually, and whenever a significant change occurs, to identify any conditions likely to introduce known or reasonably foreseeable hazards into or onto covered produce or food contact surfaces. Based on their assessments, farms would then determine whether corrective or mitigation measures are needed to reduce the potential for contamination. In light of findings from several recent produce outbreak investigations, the proposal also includes expedited mitigation measures that would be required for specific types of hazards related to certain activities associated with adjacent and nearby lands.

The FDA is committed to engaging with stakeholders on the proposed rule. As such, the agency intends to hold two virtual public meetings to discuss the proposal and hear feedback. The public meetings will be announced in a forthcoming notice in the Federal Register. In addition, the agency is also developing an online tool to assist farms in evaluating potential risks posed by their water sources and in determining potential management options.

Importantly, the FDA intends to work closely with our state partners to implement these changes, if finalized. Through the FDA-State Produce Safety Implementation Cooperative Agreement Program most states have taken the lead in developing produce safety programs which have included training and educating farms, and conducting inspections. If the proposal is finalized, the agency intends to work closely with state regulators, National Association of State Departments of Agriculture (NASDA), educators, and others, including the Produce Safety Alliance, to provide the necessary training to implement these changes to the agricultural water requirements.

The FDA also recognizes that the current agricultural water compliance dates are set to begin in January 2022. The agency intends to exercise enforcement discretion for the agricultural water requirements for covered produce (other than sprouts) while proposing to extend the compliance dates for all subpart E provisions applicable to such produce, with the goal of completing the compliance date rulemaking as quickly as possible. More information on the proposed compliance dates will be announced in a forthcoming notice in the Federal Register.

Enterprise News

Dole recalls salads because of new deadly outbreak of Listeria monocytogenes infections

The FDA, along with the CDC and state and local partners, is investigating a

multistate outbreak of Listeria monocytogenes infections potentially linked to Dole packaged leafy greens. A recall has been initiated, but there is concern consumers may have unused portions in their homes.

A full list of recalled products is available on FDA's website. In addition to Dole Fresh Vegetables Inc. brand products the recall includes salads packaged for Walmart, Kroger, and Lidl brands, among others.

According to the Centers for Disease Control and Prevention, as of Dec. 22, there are 16 people infected with the outbreak strain of Listeria monocytogenes reported from 13 states. Illnesses started on dates ranging from August 16, 2014, to Oct. 17, 2021. One case occurred in 2014 and the remaining cases occurred between 2018 and 2021. Of 14 people with information available, 12 have been hospitalized.

Two deaths have been reported from Michigan and Wisconsin. Whole genome sequencing showed that bacteria from sick people's samples are closely related genetically. This suggests that people in this outbreak got sick from the same food.

In response to sample analyses and the ongoing outbreak investigation, Dole has agreed to voluntarily suspend operations at its Bessemer City, NC, facility and Yuma, AZ, facility and has voluntarily recalled all products and brands from those facilities. Those products have production lot codes beginning with either the letter "N" or "Y" in the upper right-hand corner of the package and Best if Used By dates from Nov. 30, 2021, to Jan. 8, 2022.

"A common question is why did it take so long to link all the illnesses?," said food safety attorney Bill Marler.

"It is likely that there has been low-level, but persistent Listeria contamination in both processing facilities that was not being picked up in the first epidemiological investigations. It is most likely that the outbreaks were noticed, and the illnesses linked – both past and present – when product samples from various states were uploaded to CDC's PulseNet."

The CDC investigated this outbreak in 2019 and 2020 but was unable to gather enough data to identify the source in the past. CDC reopened the investigation in November 2021 when four new illnesses were reported since the end of August.

In October 2021, as a part of routine retail sampling, the Georgia Department of Agriculture collected a product sample of prepackaged salad mix from a grocery store for testing. According to the U.S. Food and Drug Administration the sample tested positive for Listeria monocytogenes.

In response to the sample results, Dole initiated a recall of packaged garden salads in October 2021. These products are now past their "Best if Used By" dates. The positive sample was later sent for whole genome sequencing (WGS) analysis; and in December 2021, WGS analysis was completed. The results show that the Listeria monocytogenes in the product sample was a match to the outbreak strain. The FDA is conducting an inspection at the facility that produced the product that tested positive for Listeria monocytogenes.

The FDA is also reporting that the Michigan Department of Agriculture and Rural Development also recently initiated retail sampling of Dole products in their state as part of this investigation. One product containing lettuce from a Dole facility in Yuma, AZ, tested positive for Listeria monocytogenes. Whole genome sequencing analysis showed that the Listeria monocytogenes in the product sample is also a match to the outbreak strain.

The recall related to this outbreak does not include whole head packaged

lettuce. A full list of recalled products is available on FDA's website.

The FDA recommends that anyone who received recalled products use extra vigilance in cleaning and sanitizing any surfaces and containers that may have come in contact with these products to reduce the risk of cross-contamination. Listeria can survive at refrigeration temperatures and can easily spread to other foods and surfaces.

Fresh Express salad recall expanded to Canada; outbreak investigation continues in U.S.

Fresh Express Inc. is recalling certain Fresh Express brand salad products from the marketplace because of possible Listeria monocytogenes contamination.

This recall comes after the same products were recalled in the U.S. The U.S. Food and Drug Administration and the U.S. Centers for Disease Control and Prevention have linked Fresh Express salads to an ongoing Listeria outbreak.

The recalled products have been sold in the Canadian provinces of Manitoba and Ontario and may have been distributed in other provinces and territories, according to the Canadian Food Inspection Agency.

Product codes are located on the front of the packages below the Use-By Date.

As of the posting of this recall, there have been no reported illnesses associated with the consumption of these products in Canada.

Consumers should check to see if they have the recalled products in their homes. Recalled products should not be consumed and thrown out or returned to the location where they were purchased.

More product photos can be viewed here.

About Listeria infections

Food contaminated with Listeria monocytogenes may not look or smell spoiled but can still cause serious and sometimes life-threatening infections. Anyone who has eaten any recalled products and developed symptoms of Listeria infection should seek medical treatment and tell their doctors about the possible Listeria exposure.

Also, anyone who has eaten any of the recalled products should monitor themselves for the food poisoning symptoms during the coming weeks because it can take up to 70 days after exposure to Listeria for symptoms of listeriosis to develop.

Symptoms of Listeria infection can include vomiting, nausea, persistent fever, muscle aches, severe headache, and neck stiffness. Specific laboratory tests are required to diagnose Listeria infections, which can mimic other illnesses.

Pregnant women, the elderly, young children, and people such as cancer patients who have weakened immune systems are particularly at risk of serious illnesses, life-threatening infections, and other complications. Although infected pregnant women may experience only mild, flu-like symptoms, their infections can lead to premature delivery, infection of the newborn, or even stillbirth.

Officials say outbreak is caused by frozen corn, not fresh avocados

Canadian officials have cleared avocados as the source behind an ongoing outbreak of Salmonella infections. They have determined the source of the Salmonella is frozen corn.

"There are now 84 Salmonella illnesses reported across 5 provinces. Based on the investigation findings to date, the outbreak is linked to Alasko brand frozen whole kernel corn," according to the Public Health Agency of Canada (PHAC).

The Canadian Food Inspection Agency (CFIA) issued food recall warnings on Dec. 14 and 19 for Alasko brand frozen whole kernel corn imported by New Alasko Limited Partnership. Some of the products were possibly distributed nationally. This led to a secondary recall for Fraser Valley Meats brand frozen whole kernel corn on Dec. 18.

Additional food recall warnings in Canada are possible. More information on recalled products is available online.

"Do not eat, use, sell, or serve any recalled Alasko brand or Fraser Valley Meats brand frozen whole kernel corn," PHAC advises.

"This advice applies to individuals, as well as retailers, distributors, manufacturers and food service establishments such as hotels, restaurants, cafeterias, hospitals and long-term care homes, across Canada."

About Salmonella infections

Food contaminated with Salmonella bacteria does not usually look, smell, or taste spoiled. Anyone can become sick with a Salmonella infection. Infants, children, seniors, and people with weakened immune systems are at higher risk of serious illness because their immune systems are fragile, according to the U.S. Centers for Disease Control and Prevention.

Anyone who has eaten any of the recalled products and developed symptoms of Salmonella infection should seek medical attention. Sick people should tell their doctors about the possible exposure to Salmonella bacteria because special tests are necessary to diagnose salmonellosis. Salmonella infection symptoms can mimic other illnesses, frequently leading to misdiagnosis.

Symptoms of Salmonella infection can include diarrhea, abdominal cramps, and fever within 12 to 72 hours after eating contaminated food. Otherwise, healthy

adults are usually sick for four to seven days. In some cases, however, diarrhea may be so severe that patients require hospitalization.

Older adults, children, pregnant women, and people with weakened immune systems, such as cancer patients, are more likely to develop a severe illness and serious, sometimes life-threatening conditions.

Some people get infected without getting sick or showing any symptoms. However, they may still spread the infections to others.

Kraft Heinz to acquire majority stake in Just Spices

The Kraft Heinz Company has reached an agreement to acquire an 85% stake in Germany-based Just Spices. The remaining 15% ownership stake will be retained by Just Spices' three founders, who will continue on with the company and focus on driving the business and its international growth.

Launched in 2014, Just Spices is an innovative start-up with annual sales of approximately €60 million. Its 170-plus product portfolio includes spice blends, salad dressings, and easy-to-prepare "In Minutes" blends for diverse meal occasions ranging from breakfast and light snacks to salads and baking, with a broad range of savory, sweet, classic and exotic flavors.

Just Spices' rapidly growing spice revolution business sells approximately 70% of its ready-made and one-step spice blends directly to consumers, with its remaining sales through major grocery retailers both in-store and online in Germany, Spain, Austria, and Switzerland.

"This is a great opportunity to further accelerate our growth agenda by strengthening our ability to anticipate trends in consumer tastes and preferences, as well as our speed to innovate," said Rafael Oliveira, International Zone President at Kraft Heinz.

"We will leverage our scale and agility to accelerate Just Spices' business in the fast-growing taste elevation market beyond its current German base and its recent market entries in Spain, Austria, and Switzerland. We also see tremendous potential to strengthen and enhance our own direct-to-consumer operations and go-to-market expansion."

"In the last few years, Just Spices has been further strengthening its successful omni-channel approach, with some of the best-in-class direct-to-consumer analytics in the food space. We are extremely excited by the potential for expansion that comes from combining Just Spices' innovation and brand power with the Kraft Heinz team and the scale they bring to the table," said Florian Falk, Just Spices CEO and one of the company's three founders.

The deal is subject to customary closing conditions, including merger control

approval, and is expected to be completed in the first quarter of 2022.

Testing points to cadmium as a problem for spinach

The consumer protection group As You Sow claims it has new testing data showing cadmium, a non-essential heavy metal, in a range of spinach products.

Results from the extensive testing, prompted As You Sow to file legal notices under California's Toxic Enforcement Act over more than 20 companies whose spinach products contain cadmium. Included in the notices were retailers Safeway, Target, Trader Joe's, and food brands Green Giant, Earthbound Farm (Taylor Farms), Cascadian Farms (General Mills), and Organicgirl, among others.

Cadmium is a heavy metal known to cause cancer, congenital disabilities, and other reproductive harm. It can affect fetal development, cause low birth weight, and impair neurobehavioral development in children. Chronic low-level exposure to cadmium can also damage the kidneys, bones, and lungs.

"No parent expects spinach to raise health concerns," said Danielle Fugere, president of As You Sow. "We are working with spinach companies and retailers to adjust their practices and monitor their products. Our goal is that they reduce or eliminate consumer exposures to cadmium in spinach or provide the warning required by California's Toxic Enforcement Act, so consumers can make informed choices about the foods they eat."

The problem of cadmium in spinach is well-documented, yet not enough has been done to address the problem, according to As You Sow.

In 2015, the California Department of Public Health found that a batch of baby spinach grown by Organicgirl contained 10 times more cadmium than average. Cadmium found in food products does not discriminate between natural, certified organic, and non-organic products. However, not all spinach products appear to be equally contaminated with cadmium, and cadmium content may be affected by supply chain decisions by food growers, processors, and manufacturers.

In listing cadmium as a developmental and male reproductive toxicant, California's Office of Environmental Health Hazard Assessment (OEHHA) has set a limit of 4.1 micrograms per day of exposure. As You Sow's reports, its testing showed that many spinach products sampled exceeded this limit by more than 2 times per serving, with the worst offender exceeding the limit by more than 25 times per serving.

This is not the first time As You Sow has uncovered heavy metals contamination in our food supply. As You Sow filed legal notices with more than 20 chocolate companies in 2018 for failing to warn consumers that their chocolate products contain cadmium and lead. These legal efforts culminated in a settlement with

the world's largest chocolate companies to fund an independent expert committee to investigate the sources of cadmium and lead in chocolate and find feasible measures to lower the levels of these heavy metals in chocolate products.

"Three years ago, we moved the chocolate industry to reduce consumer exposures to lead and cadmium in chocolate products," said Andrew Behar, CEO of As You Sow. "Now we hope to work with the spinach industry to do the same. Ultimately we need mechanisms to ensure that our food system is safe and that labels clearly show all of the contents including any contaminants."

MARKET NEWS - REPLY

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