NEWSMONTH

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MARKET NEWS

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Focus on China

China unveils 5-year plan for agricultural green development

The Chinese government on Wednesday unveiled a plan for the green development of the country's agricultural sector over the next five years.

The plan, jointly issued by six departments including the Ministry of Agriculture and Rural Affairs, identified resource protection, pollution control, restoration of agricultural ecology and the development of a low-carbon agricultural industrial chain as the key tasks for the 14th Five-Year Plan period (2021-2025).

The plan set quantitative objectives for the agriculture sector to be achieved by 2025, which include attaining an overall pass rate of over 98 percent in routine quality and safety tests of agricultural products.

China unveils 5-year plan to control plastic pollution

China on Wednesday unveiled a plan on controlling plastic pollution over the next five years, aiming to effectively curb white pollution by 2025.

The action plan, jointly issued by the National Development and Reform Commission and the Ministry of Ecology and Environment, details measures to cut the production and use of plastics, develop alternatives for plastics, and substantially reduce the amount of plastic waste in landfills and environmental leakage during the 14th Five-Year Plan period (2021-2025).

By 2025, key sectors such as retail, e-commerce and express delivery, are expected to drastically cut the unreasonable use of disposable plastics, according to the plan.

The country will promote the use of alternatives to plastic, such as bamboo, wood, paper and degradable plastics. It will also ramp up research on degradable-plastic technologies and encourage the orderly development of related industries.

The recycling and disposal of plastic waste will also be improved across the country, while plastic waste in key water areas, scenic spots and rural areas will be cleaned up, the plan states.

Best-selling whole wheat bread removed from Tmall after mislabeled calorie, carb counts

The best seller in the whole wheat bread category on Tmall, a major online shopping platform, has been taken off after the Shanghai Consumer Council found that the product touted as one to help keep fit contained more calories than labeled.

The calories of the sugar-free, oil-free whole wheat bread Tianyuan Zhuyi, or Arcadianism, were actually 1,001 kj per 100 grams, 1.31 times of what it labeled, the council said in an official announcement on Tuesday.

The carbohydrate amount of the bread actually tested at 38.8 g per 100 g, 1.16 times of what it was labeled, it added.

E-commerce platforms, including Tmall and JD, have taken the bread, which generated 200,000 orders each month, off the shelf.

"Consumers who wanted to lose weight will actually gain weight after eating the bread. Enterprises must abide by principles of honesty and being responsible for consumers when promoting their products," read the notice from the council.

The brand Tianyuan Zhuyi that was initiated two years ago is held by Nanyang Chuxin E-commerce Co Ltd and is aimed at young people pursuing healthy and low-calorie diets.

The brand defended itself in an official post that the test reports of the product were provided by the Henan Baixinda Detection Technology Ltd Co and the product's standard was in line with the country's laws and regulations.

Beijing restaurant under investigation over food safety

Beijing authorities have launched an investigation into "Panggelia," a popular restaurant chain featuring a crab casserole dish, after media reports exposed safety issues in the dish's ingredients.

According to the reports, two outlets of the chain in Beijing, sold dead crabs as live ones, processed spoiled potatoes for sale and provided stale chicken feet.

When law enforcement officials arrived at an outlet in Fengtai district of Beijing on Monday, the restaurant had already suspended all services and was thoroughly cleaning the kitchen.

Officials have checked the restaurant's business license and food operation certificates, which were valid, and found no expired food ingredients in the restaurant.

An authorized third-party testing company sampled raw food materials in five batches, including chicken feet, crab meat, shallot pancakes and potatoes. The results are still under review.

The restaurant has also been required to suspend services on all third-party platforms during the investigation.

Also on Monday, an investigation was carried out into a Pangelia outlet in the Chaoyang district.

International News

Europe sets new ergot alkaloids limits

The European Commission is to introduce new rules around a type of mycotoxin in certain food products.

The limits are for ergot alkaloids in barley, wheat, spelt, rye and oats and processed cereal-based food for infants and young children.

There are also changes to the legislation for ergot sclerotia, which contain ergot alkaloids. Lower levels of ergot sclerotia can already be achieved in most cereals by use of good agricultural practices and by sorting and cleaning techniques.

Ingestion of ergot alkaloids can cause ergotism in humans and animals. This was common in humans centuries ago but is rare nowadays. It can cause

hallucinations and in extreme cases loss of limbs. Other symptoms include abdominal pains, vomiting, burning sensations of the skin and insomnia.

EFSA input

Affected foodstuffs put on the market before January 2022 may continue to be sold until their dates of minimum durability or use-by. Certain maximum levels do not come into force until July 2024.

In June 2012, the European Food Safety Authority (EFSA) adopted an opinion on ergot alkaloids in food and feed. It established a group acute reference dose and a group tolerable daily intake per day.

EFSA concluded that, although data did not indicate a cause for concern for any population subgroup, dietary exposure estimates related to only a few food groups, and there could be possible unknown contributions from other foods.

In July 2017, EFSA published a report on human and animal dietary exposure to ergot alkaloids. For some population groups, estimates indicated an exposure close to the tolerable daily intake. For the highest exposure estimates, the main contributors to chronic dietary exposure were different types of bread and rolls such as those containing or made of rye.

Levels depend on grain type

Rye is the cereal species with a higher risk of contamination by ergot sclerotia so lower levels of ergot alkaloids are more difficult to achieve. This is why the EU has set a higher maximum level for rye milling products and a lower limit for milling products of other cereals.

These different levels depend on the ash content of the products as items containing more bran — higher ash content — have naturally higher levels of ergot alkaloids as dust of ergot sclerotia is absorbed to bran.

A higher maximum level for ergot alkaloids in wheat gluten has been established. Wheat gluten, as a by-product of the wet milling process, contains higher levels of ergot alkaloids despite good practices as ergot alkaloids concentrate because of its production process.

To allow the EU Commission to monitor progression toward the stricter maximum levels and to assess possible modifications because of changes in agricultural practices or in climatic and environmental factors, member states must provide data and information.

Member states have until January 2023 to share results of investigations with the EU Commission as well as progress on applying prevention measures to avoid contamination by ergot alkaloids in rye and rye milling products and in milling products of barley, wheat, spelt and oats grains.

Countries also need to report on a regular basis occurrence data on ergot alkaloids in these products to the EFSA database.

FDA announces new 'Office of Digital Transformation'

The U.S. Food and Drug Administration has announced the reorganization of the agency's information technology, data management and cybersecurity functions into the new Office of Digital Transformation (ODT).

According to acting FDA Commissioner Janet Woodcock, M.D., "Good data management, built into all of our work, ultimately helps us meet and advance the FDA's mission to ensure safe and effective products for American families."

The office has been realigned to report directly to the FDA commissioner,

elevating the office and its functions to agency-level. This reorganization will advance the agency's information technology transformation with improved data and IT competencies that improve agency operations to support the public health mission.

The reorganization is part of the FDA's technology and data modernization efforts that began more than two years ago. The reorganization allows the FDA to bring more effective and efficient data and IT management, built on best practices, to streamline and advance FDA operations by reducing duplicative processes, implementing technological efficiencies using projects that deliver the most customer benefits, and promoting shared services within agency offices and centers to strategically and securely further the agency's regulatory mission.

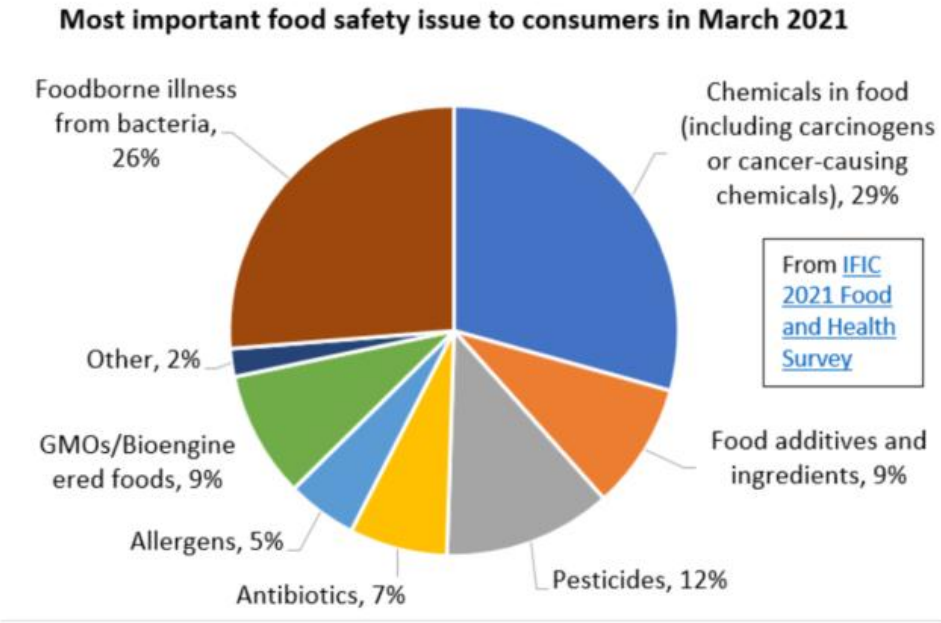
"By prioritizing data and information stewardship throughout all of our operations," Woodcock said, "the American public is better assured of the safety of the nation's food, drugs, medical devices and other products that the FDA regulates in this complex world."

About the technology and data modernization plans

The FDA has been undertaking a modernization effort since Sept. 2019, with the Technology Modernization Action Plan, which laid the groundwork for the more modern approach to the use of technology for the agency's regulatory mission, including looking at innovative ways for the review of food safety, medical product applications, and other critical functions.

That was followed by the Data Modernization Action Plan, announced earlier this year, which built upon the successful streamlining and process improvements started in 2019 to identify and execute high-value driver projects for individual centers and for the agency. As part of the establishment of this new office, the agency is also announcing the appointment of Vid Desai as the agency's new Chief Information Officer.

Chemicals in food continue to be a top food safety concern among consumers



The latest annual food industry survey demonstrates that U.S. consumers continue to have significant concerns about chemicals in food. Specifically, the survey from the International Food Information Council (IFIC) found:

- 29 percent of consumers rated chemicals in food as their top food safety concern, more than any other issue, including foodborne illness from bacteria. Everyone rated chemicals in food among the top three concerns.

Chemicals in food has been the top concern every year since 2017, tying risk from COVID-19 from food last year. It has been a significant concern back to the first IFIC Food and Health Survey in 2009.

- 69 percent of consumers did not realize that the U.S. government is responsible for reviewing the safety of low-calorie sweeteners, which are among the most well-known food additives.
- 54 percent of consumers reported it is important that ingredients do not have "chemical-sounding names" including 26 percent that rate it "very important." Their opinion is primarily based on food safety and healthfulness concerns.

Our takeaway is that consumers continue to be concerned about chemicals in food, partly because they are not confident that the federal government is actually ensuring additives are safe. Therefore, they do their best to try and protect their health and safety by avoiding ingredients that sound like chemicals – the only way they see to control the perceived risk. In reaction to consumer concerns, food companies have undertaken "clean label" programs that either remove these ingredients (which can be helpful) or use names that do not sound like chemicals (which obscure the fact and can be misleading).

A better approach is to actually ensure the chemicals in food are safe and healthy rather than leaving consumers to judge products based on the sound of the ingredient names. Actual safety is the outcome that Congress intended when it adopted the Food Additives Amendment of 1958. Instead, the Food and Drug Administration (FDA), the agency with both the responsibility and the authority for food safety, allows companies to decide in secret that additives are safe, fails to consider the cumulative health effect of chemicals in the diet, and lacks any systematic reassessment of past decisions even when new evidence shows potential harm.

FDA needs to step up and address these shortcomings to make our food safe and restore consumer confidence. This involves not only improving its approach to addressing ingredient safety but also their approach toward contaminants that enter our food from the environment, from the packaging, or from food processing.

Chemicals in food is No. 1 food safety concern

According to the survey, conducted at the end of March 2021, just one in six surveyed is very confident that the food supply is safe. About half of consumers are only "somewhat confident" that food is safe, and one quarter say that they are either "not at all confident" or "not too confident."

When consumers were asked to identify their most important food safety concern, 29 percent selected either "chemicals in food" or "carcinogens or cancer-causing chemicals in food"[1] as their No. 1 concern compared to 26 percent for "foodborne illness from bacteria." Adding consumers who treated "pesticides" and "food additives and ingredients" as chemicals to the total means half of consumers rate chemicals as their top concern.

Chemicals in food has been top concern since 2017

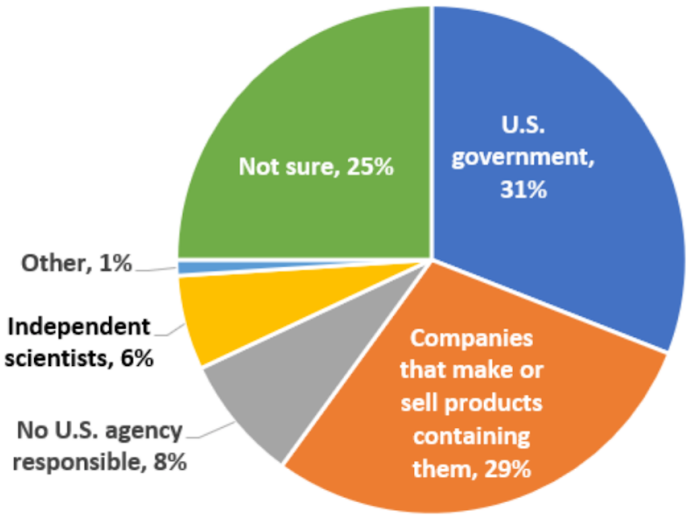
Consumer concern with chemicals in food is not new. From 2017 to 2019[2], between 33 percent and 35 percent of consumers rated chemicals in food as their top food safety concern, more than anything else. It dropped to 24 percent last year when IFIC surveyed consumers in April – as the pandemic dominated the news – and added the option of "food handling/food preparation related to the risk of COVID-19 from food." Even then the pandemic tied for No. 1 with

chemicals in food. IFIC did not offer COVID-19 as an option in 2021.

Most consumers don't know the U.S. government is responsible for the safety of additives

Over the years, low/no-calorie sweeteners have been among the most widely recognized and controversial additives. For more than five years, IFIC has been surveying consumer sentiment on these additives. Those surveys consistently find that most consumers recognize that they need to reduce the amount of sugar they eat or drink with one-third likely to use low/no-calorie sweeteners as a viable alternative. Among those using low/no-calorie sweeteners, about a third see them as unhealthy or not good for you but apparently better than added sugar.

Who is responsible for reviewing safety of low-calorie sweeteners



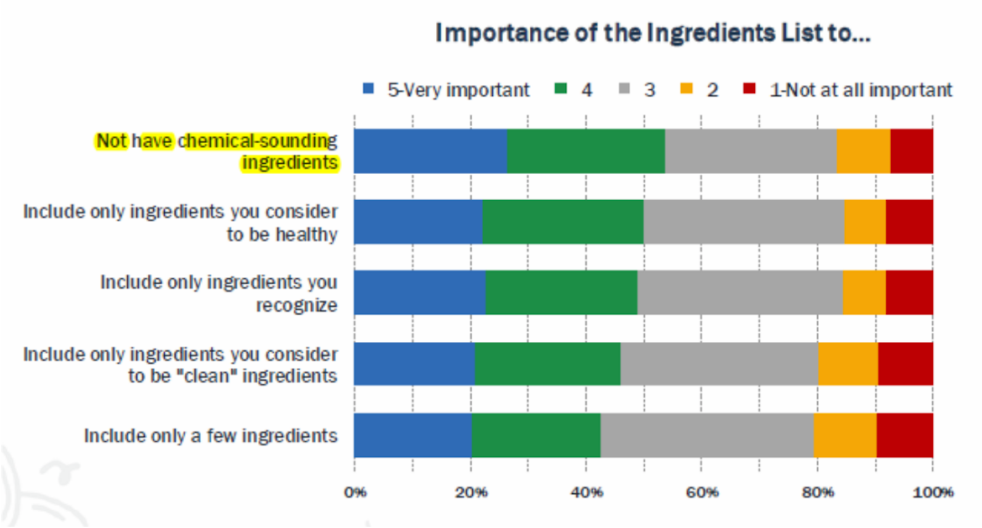
In its 2021 survey, IFIC apparently sought to better understand why consumers were so hesitant to accept that low/no calorie sweeteners are safe. It asked consumers who they thought was responsible for reviewing the safety of these chemicals. Presumably, if consumers thought that food manufacturers were responsible for the review and not the federal government, they would recognize the companies' bias and be more hesitant. However, 29 present of the surveyed thought companies are responsible for safety of their products.

Only 31 percent of consumers thought the U.S. government is responsible for reviewing the safety of these additives and 8 percent thought no U.S. agency is responsible. Consumer perception is not particularly surprising and may be grounded on a general concern that the U.S. government is not watching out for their best interests, including chemicals added to food. Sweeteners like aspartame, sucralose, acesulfame-K, saccharin, and various sugar alcohols were approved by the Food and Drug Administration (FDA) as food additives until the late 1990s. Then, FDA began to turn over responsibility for additive safety to companies under a flawed interpretation of an exemption in the law for the use of substances that are Generally Recognized as Safe (GRAS). FDA allows companies to self-certify chemicals as safe without notice to the agency or the public with the option of seeking voluntary review. FDA posts the results of the voluntary reviews online and some companies have submitted notices for low/no-calorie sweeteners. Unfortunately, the agency depends on the companies to provide the notice and does not know how many substances are used without its knowledge.

Most consumers avoid chemical-sounding ingredients

The IFIC survey also explored the implications of consumer's concern about chemicals in food. It found that 54 percent say it is "important" that ingredients do not have "chemical-sounding names" including 26 percent that rate it "very

important." That is more than any other concern about ingredients.



From our perspective, consumers should not feel the need to avoid chemical-sounding ingredients. Rather, they should have confidence that the food is safe from ingredients and contaminants that may harm them. Based on the IFIC survey, that is not the current situation.

FDA needs to step up to ensure the safety of our food

FDA and the food manufacturers are responsible for ensuring food chemicals are safe. Their failure leaves consumers struggling to fill the gap. With the exception of eight major allergens, consumers cannot realistically evaluate the safety of ingredients, or even know all of the ingredients that have been added, based on a product's label.

While FDA is required by law to ensure substances added to our food are safe, the agency has not been doing its job. FDA needs to step up to ensure our food is safe by ending secrecy, using modern science, and reassessing the safety of chemicals approved decades ago. By taking this action, consumers will be less concerned about chemicals in general and may be less hesitant about buying foods with chemical-sounding ingredients or low/no calorie sweeteners.

Food fraud discussions continue to rise in Europe

Fats and oils remained the category most debated in 2020 by European countries trying to tackle food fraud, according to a report.

The EU Agri-Food Fraud Network (FFN) is managed by the Directorate-General for Health and Food Safety (DG Sante) of the European Commission.

The annual report does not measure the number of agri-food fraud incidents in the EU or cover national level operations.

FFN members share information in the Administrative Assistance and Cooperation system — Food Fraud (AAC-FF), which is managed by the EU Commission. The number of cases created per year has more than doubled, from 157 in 2016 to 349 in 2020. This is a 20 percent increase on 2019, with the main categories being fats and oils, fish and meat products, and non-compliances in movement of pet animals.

This does not necessarily mean fraud has increased as not all cases are confirmed violations of EU law. The report does not say how many investigations have been resolved. The system is only used to exchange information on cross-border issues.

In 2020, a fifth of notifications concerned live animals or products other than food or feed. Among these, the most notified category was suspicious movements of cats and dogs, while second was horse meat and horses'

passports. These exchanges were linked to OPSON IX and an action by Europol to support national authorities in fighting the sale of illegal horse meat.

German domination

Since 2018 Germany has created the highest number of requests calling on other countries to investigate possible non-compliances. As in 2019, they were followed by Belgium and France. The United Kingdom had six in the final year it could create notifications in the AAC-FF system. Compared to Germany's 84 posts, Austria, Netherlands, Czech Republic, Norway, Sweden, Finland, Switzerland, Bulgaria, Portugal, Spain, Poland, Greece, Croatia and Romania all made less than 10.

Fats and oils, mostly olive oil, was the top notified product category in 2020, as in 2019. Member states have to do annual controls to ensure marketing standards for olive oil are respected.

Fish and fishery products stayed second. Most issues relate to suspicions of illegal treatments of tuna with nitrates and carbon monoxide or undeclared water addition. Poultry meat products was fourth, followed by honey and royal jelly and meat products.

There were more notifications for food supplements, mainly related to their online sale with health claims on COVID-19 prevention and treatment. An EU operation began in April 2020 involving 19 countries.

It led to the reporting of 646 cases of food products claiming to prevent, treat or cure COVID-19. Italy made the most notifications. For 88 of them, their cross-border dimension meant they went through the AAC or the Rapid Alert System for Food and Feed, as in three cases, a risk to health was identified. As of July, more than 100 cases were ongoing. Some fines and injunctions had been issued but mostly the health claim or offer had been changed or removed.

As in previous years, the most commonly reported category in 2020 was mislabeling. For example, when non-extra virgin olive oil is presented as extra virgin.

The second main non-compliance type was documents, including issues of falsified documents and traceability. Next was replacement and dilution, referring to mixing or replacing an ingredient of high value with one of low value. Then came unapproved treatment, which includes treating tuna with nitrites.

Coordinated actions focused on horse passport falsification, illegal trade of bivalve mollusks, adulteration of herbs and spices and unauthorized use of ethylene oxide.

Product origin

From 349 AAC-FF requests in 2020, 98 concerned products of non-EU origin, 199 for those from the EU and 52 where the origin was not known. Following suspicions of fraud, the EU Commission sent about 100 requests to authorities in non-EU countries, requiring additional information, corrective actions or investigations at establishments.

In 2019, of the 292 requests, 81 concerned products of non-EU origin, mainly from China and Turkey but one was from the United States. Of the 189 requests for items from the EU, most came from Spain and Italy.

Cases investigated this past year by the European Anti-Fraud Office (OLAF) include illegal import of pork from countries without sanitary certificates, illegal trading of protected fish (CITES listed) species and counterfeit alcohol, especially spirits.

A foodborne outbreak in 2018 in Spain prompted an investigation into the illegal trade of bivalve mollusks. The outbreak was caused by contaminated clams suspected to have been harvested in non-authorized areas. Investigations found it was a widespread issue involving operators using similar patterns in other EU countries.

Since mid-2018, 39 non-compliance notifications for bivalves were submitted to the AAC system, mainly by Spain and Portugal. Action resulted in the seizure and withdrawal of almost 40 tons of clams. Eleven companies were inspected and 43 people arrested.

Study shows Cronobacter in dried fruit, nuts and seeds

Researchers have found Cronobacter in samples of nuts, seeds and dried fruit in Poland.

The study determined the microbiological quality of commercial ready-to-eat food products of plant origin with a focus on Cronobacter.

Analyses were carried out on 64 samples of nuts, dried fruits, candied fruits, seeds, and mixes of seeds, dried fruits and nuts. Samples were tested for the total plate count of bacteria (TPC), counts of yeasts and molds, and the occurrence of Cronobacter.

Cronobacter demonstrate a range of properties which enable survival in various food products and allow them to adapt to a changing environment during the manufacturing process, according to the study published in the journal Pathogens.

TPC, yeast and mold

The level of TPC in nuts is believed to be an indicator of postharvest contamination of these products. TPC were not found in samples of seeds and candied fruits.

Five samples, including dried fruits, seeds and mixes of dried fruits, nuts and seeds, had excessive counts of mold based on international guidelines but yeast levels were satisfactory and not detected in seeds and candied fruits.

Samples were bought in Warsaw, Poland, at different supermarkets, from September 2018 to February 2019. They came from seven producers.

The 20 nut samples included Italian and Brazil nuts, hazelnuts, almonds, pecans, cashews, pine nuts and macadamias. The 24 samples of dried fruit were prunes, raisins, cherries, sour cherries, figs, bananas, dates, apricots, blackcurrants, cranberries, goji and chia berries.

Eight samples were candied fruit like mango, pineapple, jackfruit, plums, and passion fruit. Another eight were mixes in various proportions of raisins, dried

cranberries, walnuts, hazelnuts, cashews, almonds, and sunflower seeds. Four were samples of sunflower and pumpkin seeds.

Cronobacter findings

There are no regulations for Cronobacter in foodstuffs except for powdered infant formulas.

Ten samples of nuts and two mixes were contaminated with Cronobacter. It was not detected in dried or candied fruits, and seeds. The prevalence of Cronobacter in nuts and in mixes of dried fruits, seeds and nuts accounted for 50 percent and 25 percent respectively.

Three Cronobacter species were isolated from nuts and mixes of nuts, dried fruits and seeds.

Presence of Cronobacter sakazakii was confirmed in some Brazil nut samples and certain mixes of dried fruits, seeds and nuts. Cronobacter turicensis was detected in 20 percent of almonds and hazelnuts. Cronobacter malonaticus was found in 20 percent of hazelnuts, cashews, pine nuts and macadamias and in 12.5 percent of the samples of mixes of dried fruits, seeds and nuts.

Report looks at how non-EU nations handle novel foods, GMOs

A report has shown how the regulation of novel foods and genetically modified organisms is different around the world.

Research published by the Food Standards Agency (FSA) looked at international regulations on genetically modified and novel foods and how they differ from requirements in the United Kingdom.

Novel foods and genetically modified organisms (GMOs) are subject to a large variation in regulatory approaches in non-EU countries. A novel food is a food or substance that was not used for human consumption to a significant degree within the EU before mid-May 1997.

Countries selected for the novel foods review included Australia, Canada, Japan, and the United States while Argentina, Australia, Brazil, Canada, and the United States were studied in terms of GMOs.

Novel foods

The report, produced by Campden BRI, assessed how differences in regulations impacted trade and the approach countries have for authorization.

Japan and the U.S. do not directly address novel foods or food ingredients in legislation. Australia and Canada have a regulatory stance that more closely reflects the EU position, however, there are differences in the definitions, what falls under novel food legislation, and authorization procedures. In both markets,

approval is required before such food is sold.

In the UK, local authorities, including trading standards and environmental health officers, are responsible for the inspection of novel foods on the market and enforcement of such legislation.

Genetically modified foods

For GMOs, the EU and Australia place emphasis on the process used to derive the product while Argentina, Canada, and the United States focus on the final product. The Australian approach relies on the regulator reviewing the lists of techniques that generate or do not generate GMOs. In Canada and the United States, genetically modified products are regulated under the same legal provisions as their conventional counterparts.

Argentina and Canada have no mandatory requirements for labelling GMO content in foods. Such labelling is required in Australia, Brazil, and the EU but the rules are different.

Results from the Department of Environment, Food and Rural Affairs' (Defra) consultation into the regulation of genetic technologies are due later this year.

Robin May, FSA chief scientific adviser, said it was vital to carry out research into all elements of the food system.

"Any possible changes to regulatory processes, whether relating to GMOs, novel foods or anything else, would be a decision for ministers but we provide advice based on the very latest science and evidence available, ensuring that our absolute priority remains protection of public health."

A review of global agreements found there was no reference to novel foods or foods from genetically modified organisms.

The EU approach to regulating genetically modified crops has been the subject of a dispute assessed in the World Trade Organization. The EU's definition of what constitutes a novel food has also been discussed, particularly with South American states.

Genome editing opinions

A separate survey has found consumers have very low awareness and knowledge of genome edited food. Most had not heard of genome edited food or confused it with GM food.

The FSA commissioned Ipsos MORI to do a series of online workshops with 80 people across England, Wales, and Northern Ireland and an online survey of 2,066 consumers in these countries.

Ipsos MORI said low awareness of genome edited foods is unsurprising given there are not many such foods available worldwide, and none in the UK. Genome edited plants were deemed more acceptable, and presumed safer to eat, than edited animals.

The more informed consumers were, or became, the more accepting of genome edited food they were despite some still having concerns. People felt labelling of such foods should always inform on the presence of genome edited ingredients using the full term "genome edited." Some felt that, because it is a relatively new technique, there may be unknown food safety and animal welfare risks.

Most consumers felt genome edited foods should be regulated separately from GM foods, because they are two different techniques. However, many felt the level of scrutiny, testing and regulation should be just as high as for Genetically Modified Organisms (GMOs), at least at the start.

Genome editing is a technique to create specific changes to part of a living thing's DNA to improve existing characteristics. Genetic modification is used to artificially insert DNA from one living thing into the DNA of another living thing, introducing a new or different characteristic.

Before respondents were given the definition of genome editing, nearly a third said they "probably" or "definitely" should be sold in the UK, while slightly more said genome edited foods "probably" or "definitely" should not be sold and another third said "don't know."

Once shown the definition, two in five indicated that genome edited food products were "very" or "fairly" safe to eat, while three in 10 thought they were "very" or "fairly" unsafe or said they "did not know." Only 7 percent thought these food products were "very" safe.

FDA collecting, testing samples of cantaloupe for Salmonella, Listeria

The FDA recently announced it is conducting a year-long testing project on freshcut, also called pre-cut, cantaloupe.

In addition to testing for the foodborne pathogens of Salmonella and Listeria monocytogenes, the sampling "assignment" includes inspections reviewing preventive controls and identifying possible sources and routes of contamination, according to the announcement from the Food and Drug Administration.

The agency's plan is to gather and test 240 samples of U.S. cantaloupe that has been pre-cut prior to sale to the end user, such as retailers, schools and hospitals. Sample collection is scheduled to conclude in June 2022.

FDA inspectors are collecting the cantaloupe samples from processors, warehouses and distribution centers. Unless inspectors have reason to believe there is a need for it, testing will not be conducted on samples from packing houses, growing operations or retail locations, according to FDA.

Following the collection of the samples and laboratory testing, data analysis will be conducted. The agency is scheduled to publish a summary report, but a specific publish date has not been set.

In 2011 a Listeria monocytogenes outbreak traced to cantaloupe from Jensen Farms in Colorado sickened at least 147 people, killing at least 33 of them. Ten other deaths not attributed to listeriosis occurred among people who had been infected with an outbreak-associated subtype.

The 28-state outbreak sickened people from less than one year old to 96 years old. Among the 145 ill people with available information, 99 percent, or 143, were so sick they had to be admitted to hospitals.

One way the edible portion of cantaloupe can become contaminated is during the cutting process. If pathogens are still on the rind after washing, they can be dragged into the edible flesh of the melons. Also, if cutting equipment is not properly cleaned, pathogens can contaminate it and cross contaminate the fruit.

Salmonella reports in UK animals increase in 2020

Overall findings of Salmonella in livestock in the United Kingdom in 2020 went up, according to a report.

Data covers Salmonella reports from livestock in England, Wales and Scotland collected by the Animal and Plant Health Agency (APHA) during 2020. Samples were taken from premises including farms, hatcheries, veterinary practices, zoos and slaughterhouses.

The rise came despite a reduction in non-statutory surveillance and clinical diagnosis submissions in many species because of the COVID-19 pandemic and associated lockdown measures.

The document revealed 5,263 lab reports of Salmonella from humans were sent to Public Health England, Public Health Wales and Public Health Scotland in 2020. This is 45 percent lower than the 9,588 isolations in 2019 and 48 percent down from 10,143 in 2018.

Salmonella by animal and type

In 2020, the number of Salmonella isolations overall from cattle, sheep, pigs and poultry increased by 7.6 percent compared with 2019 to 3,279 from 3,046 isolations but decreased by 7.3 percent on 2018 numbers.

Compared to 2019, fewer isolations from cattle, sheep, turkeys and ducks were recorded, but those for pigs and chickens rose. Most Salmonella reports from cattle, sheep and pigs are because of clinically diseased animals whereas those from chickens and turkeys are mostly from surveillance.

There were 52 isolations of Salmonella Newport in chickens, which is more than 10 times the number in 2019. Many of these were from an ongoing outbreak investigation in the layer sector. A single isolate of Salmonella Mikawasima — not related to a human outbreak strain — was isolated from chickens in the UK for the first time. The presence of one strain of Salmonella indicates others may be present.

There were two and a half times more isolations of Salmonella Agona with 103 in 2020 versus 40 in 2019, twice as many of Salmonella Bovismorbificans from 20 to 43 and almost three times as many Salmonella Newport isolations to 66. Salmonella Kedougou also went up. Isolations of Salmonella Typhimurium increased from 124 in 2019 to 159.

There were fewer isolations of Salmonella Derby from 183 to 39, Salmonella Indiana fell from 101 to 65 and Salmonella Mbandaka dropped from 451 to 326. Reports of Salmonella Enteritidis were at 34 in 2020 compared with 50 in 2019.

A total of 3,527 isolations of Salmonella from livestock in 2020 were noted, which is up almost 3 percent from 2019. They mostly came from chickens, followed by cattle, ducks, turkeys, pigs, sheep and horses.

Two isolations were found in geese compared with none the year before. The figure went down for horses to 41. There were only a few from pheasants and partridge and none from quail, guinea fowl, deer, goats or rabbits. Almost 180 isolations were made from non-statutory species such as cats, dogs and reptiles.

Feed findings

Surveillance data for 2020 shows that only 23.1 percent of the isolations of Salmonella reported to APHA resulted from samples taken because of clinical disease in livestock. This is lower than during both 2019 and 2018. It contrasts with data for Salmonella in humans where reports usually originate from cases of clinical disease.

There were 756 isolations of Salmonella from animal feeding stuffs in 2020, including from compound feed and feed ingredients or products associated with testing under animal by-products regulations. This is an increase of 6 percent compared with 2019 and up from 627 isolations in 2018.

In total, 107 isolations of regulated Salmonella serovars were detected in animal feed and related products. This is higher than the 88 in 2019 and 63 in 2018.

There were 273 isolations of Salmonella from pet food intended to be fed raw during 2020. This is 11.4 percent higher than 2019 and 45.2 percent higher than 2018. A total of 62 isolations were of regulated serovars from raw pet food, which is up from 38 in 2019 and 35 in 2018. Pet food, especially raw foods, can infect people through cross-contamination of utensils and surfaces, as well as inadequate hand washing.

Of the more than 4,200 Salmonella isolates examined during 2020, 68.3 percent were susceptible to all 16 antimicrobial compounds tested. The percentage of isolates resistant to ciprofloxacin in 2020 was 0.5 percent.

Investigations into Salmonella outbreaks advancing but no cause found yet

Two Salmonella outbreak investigations that have sickened a total of more than 200 people are picking up steam at the FDA.

One has sickened at least 127 people with Salmonella Oranienburg infections and stretches across 25 states.

Although the source of the outbreak pathogen remains unknown, an update Sept. 22 from the Food and Drug Administration shows that in addition to ongoing traceback efforts the agency has begun sample collections and testing. The agency did not provide any information about where the samples were collected or whether they came from patients, food or locations where food is produced or sold.

The other outbreak involves Salmonella Thompson and has sickened at least 78 people. The FDA has begun onsite inspections of unnamed locations, according to the update.

The FDA is working with state officials and the U.S. Centers for Disease Control and Prevention on the outbreak investigations.

The table below shows ongoing outbreak investigations being managed by FDA's CORE Response Teams. The investigations are in a variety of stages. Some outbreaks have limited information with active investigations ongoing, others may be near completion or concluded. The table below has been abbreviated to show only active investigations.

The Food and Drug Administration will issue public health advisories for outbreak investigations that result in "specific, actionable steps for consumers — such as throwing out or avoiding specific foods — to take to protect themselves," according to the outbreak table page.

Not all recalls and alerts result in an outbreak of foodborne illness. Not all outbreaks result in recalls.

Outbreak investigations that do not result in specific, actionable steps for consumers may or may not conclusively identify a source or reveal any contributing factors, according to CORE's outbreak table page. If a source(s) and/or contributing factors are identified that could inform future prevention, FDA commits to providing a summary of those findings, according to CORE officials.

Date Posted	Reference #	Pathogen	Product(s) Linked to Illnesses (if any)	Total Case Count	Investigation Status	Outbreak Status	Recall Initiated	Traceback Initiated	On-Site Inspection Initiated	Sample Collection & Analysis Initiated
9/15/2021	1031	*Salmonella* Oranienburg	Not Yet Identified	See CDC Investigation Notice	Active	Ongoing See CDC Investigation Notice		✔		✔
9/15/2021	1025	*Salmonella* Thompson	Not Yet Identified	78	Active	Ongoing See Advice		✔	✔	
8/11/2021	1026	*Cyclospora*	Not Yet Identified	39*	Active	Ongoing See Advice		✔		
7/14/2021	1020	*Cyclospora*	Not Yet Identified	129*	Active	Ongoing See Advice		✔	✔	✔
7/14/2021	1019	*Salmonella* Typhimurium	Salad Greens	See Outbreak Advisory	Active	Ongoing See Outbreak Advisory	See Outbreak Advisory	✔	✔	✔
3/17/2021	999	Acute Non-viral Hepatitis	Alkaline Bottled Water	See Advisory	Active	Ongoing See Advisory	See Advisory		✔	✔

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 CDC.

Anyone who has 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.

EU evaluates food irradiation rules as usage declines

An evaluation of food irradiation rules in Europe has found legislation is unlikely to have much impact on use because of a decline driven by industry and consumer fears, despite scientific evidence of its safety.

European Union directives on the topic came into force in 1999 and have not been amended much since. A roadmap was produced in 2017 followed by a study commissioned by DG Sante and public comments in 2020, which received 72 responses, mainly from EU citizens.

The evaluation found the directives had been inefficient at ensuring a level playing field between EU and non-EU countries and, because of a labeling requirement, had affected businesses' ability to use irradiation.

Irradiation is a food decontamination technique and a 2011 European Food Safety Authority opinion found it is effective in ensuring the microbiological safety of foods. Some consumer associations and the European Parliament previously raised concerns that it may be misused by businesses to mask poor hygiene in production processes.

The U.S. Food and Drug Administration has approved a variety of foods for irradiation including beef and pork; crustaceans such as lobster, shrimp, and crab; fresh fruits and vegetables; lettuce and spinach; poultry; shell eggs and spices and seasonings.

Current situation in Europe

The EU irradiated more than 9,200 tons of food in 2010 but below 4,000 tons in 2019. The main reason for this decline seems to be industry concern that consumers would refuse to buy food labelled as irradiated, although this has not been demonstrated. In 2018 and 2019, more than 80 percent of food irradiated in the EU was treated at one facility in Belgium.

Only dried aromatic herbs, spices and vegetable seasonings have EU-wide authorization but different products have national approvals. The words "irradiated" or "treated with ionising radiation" must appear on the packaging. A move to approve other products was launched in 2000 but was opposed by a number of food businesses and consumer organizations, and was stopped by the European Parliament in 2002.

The latest data shows 24 approved irradiation facilities in 14 EU countries. The top products irradiated are frog legs, poultry, and dried aromatic herbs, spices and vegetables seasonings. Ten sites are approved in non-EU countries. Three each in South Africa and India, two in Thailand and one each in Switzerland and Turkey.

Between 1999 and 2019, there were 358 RASFF notifications related to irradiation. The most frequent countries of origin for products subject to notifications were China, the United States, Russia and Vietnam – with none of them having EU approved irradiation facilities. In 2020, six alerts were registered: two from China, and one each from the United States, India, Vietnam and Belgium.

Member states carry out official checks but the intensity differs greatly with more than half done by Germany. Almost all non-compliances relate to imported foodstuffs, suggesting potential gaps in the enforcement of irradiation legislation at the border.

Future direction unclear

Findings of the work don't point to any option for the future of European food irradiation legislation, among the four identified: status quo, adoption of an EU list of foods authorized for irradiation, and amendment or repealing the directives.

As long as the EU food industry and consumers are reluctant about irradiated foods, legislation will have a negligible impact on use of the technology, said the report.

Because of the lack of data on food irradiation and its alternatives, the evaluation could not conclude to what extent the rules had contributed to better food hygiene and reduced foodborne outbreaks.

Regulations did not achieve harmonization of legislation on irradiation across the EU with national agencies able to apply authorizations and bans on other irradiated foodstuffs than herbs and spices. Belgium, Czech Republic, France, Italy, Netherlands and Poland have a national list of authorizations on the treatment of foodstuffs with ionizing radiation.

The EU report said the reluctance of industry to use food irradiation can have serious consequences as shown by the ethylene oxide (ETO) incident.

"In September 2020, residues of ETO, a substance banned in the EU and dangerous to human health, were detected in sesame seeds from India. The seeds had been treated with this hazardous substance to eliminate microbiological contamination, while food irradiation could have been used for the same purpose," according to the report.

EPA ends use of pesticide chlorpyrifos on food because of human safety concerns

The U.S. Environmental Protection Agency has announced that it will stop the use of the pesticide chlorpyrifos on all food for the protection of human health,

particularly that of children and farmworkers.

EPA Administrator Michael S. Regan said chlorpyrifos's removal from the marketplace is "an overdue step to protect public health. Ending the use of chlorpyrifos on food will help to ensure children, farmworkers, and all people are protected from the potentially dangerous consequences of this pesticide,"

"After the delays and denials of the (Trump) administration, EPA will follow the science and put health and safety first," Regan added.

Chlorpyrifos has been used on corn, soybeans, and other food crops. It was only last December that EPA extended the use of the pesticide chlorpyrifos for some agricultural purposes. Several states previously banned the use of the pesticide. The EPA announced the ban on Aug. 18.

Chlorpyrifos has gained a reputation as a "toxic, brain-damaging pesticide. Agricultural interests say they are exploring other treatment options now that chlorpyrifos is out of the picture.

As a final rule, EPA is revoking all "tolerances" for chlorpyrifos, which establish an amount of a pesticide that is allowed on food. In addition, the agency will issue a Notice of Intent to Cancel under the Federal Insecticide, Fungicide, and Rodenticide Act to cancel registered food uses of chlorpyrifos associated with the revoked tolerances.

The Obama administration came close to withdrawing chlorpyrifos, but Trump's White House kept it available for farm uses. And Dow AgroSciences, the largest manufacturer of the pesticide, was pressured to limit the ban.

Chlorpyrifos is an organophosphate insecticide used for a large variety of agricultural uses, including soybeans, fruit and nut trees, broccoli, cauliflower, and other row crops, as well as non-food uses. It has been found to inhibit an enzyme, which leads to neurotoxicity, and has also been associated with potential neurological effects in children.

The steps the agency is announcing today respond to the U.S. Court's Ninth Circuit's order directing EPA to issue a final rule in response to the 2007 petition filed by Pesticide Action Network North America and Natural Resources Defense Council. The petition requested that EPA revoke all chlorpyrifos tolerances, or the maximum allowed residue levels in food, because those tolerances were not safe, in part due to the potential for neurodevelopmental effects in children.

Under the Trump Administration, EPA denied the petition in 2017 and denied the subsequent objections in 2019. These denials were challenged in the Ninth Circuit Court of Appeals in 2019 by a coalition of farmworkers, health, environmental, and other groups. In April 2021, the court found that ". . . EPA had abdicated its statutory duty under the Federal Food, Drug and Cosmetic Act . . ." to "conclude, to the statutorily required standard of reasonable certainty, that the present tolerances caused no harm." In its decision, the court ordered EPA to grant the petition, issue a final rule in which the agency either modifies the chlorpyrifos tolerances with a supporting safety determination or revokes the tolerances, and modify or cancel food-use registrations of chlorpyrifos.

EPA has determined that the current aggregate exposures from the use of chlorpyrifos do not meet the legally required safety standard that there is a reasonable certainty that no harm will result from such exposures. A number of other countries, including the European Union and Canada, and some states including California, Hawaii, New York, Maryland, and Oregon have already taken similar action to restrict the use of this pesticide on food.

While farmers have historically relied on chlorpyrifos, its use has been in decline due to restrictions at the state level and reduced production. Additionally, some alternatives have been registered in recent years for most crops. There are also other chemistries and insect growth regulators available for certain target pests. EPA is committed to reviewing replacements and alternatives to chlorpyrifos.

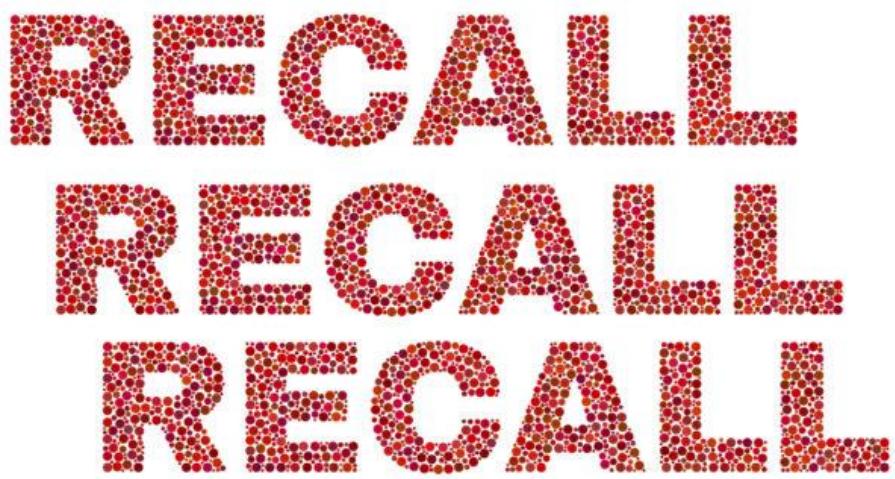
The U.S., according to the government, has a safe and abundant food supply, and children and others should continue to eat a variety of foods, as recommended by the federal government and nutritional experts. Washing and scrubbing fresh fruits and vegetables with plain water will help remove traces of bacteria, chemicals, and dirt from the surface.

This EPA action will also be incorporated into the ongoing registration review for chlorpyrifos. EPA is continuing to review the comments submitted on the chlorpyrifos proposed interim decision, draft revised human health risk assessment, and draft ecological risk assessment. These documents are available in the chlorpyrifos registration review docket EPA-HQ-OPP-2008-0850 at www.regulations.gov.

After considering public comments, the agency will proceed with registration review for the remaining non-food uses of chlorpyrifos by issuing the interim decision, which may consider additional measures to reduce human health and ecological risks.

Enterprise News

European Butcher brand bacon 'chuncks' recalled because of Listeria concerns



European Butcher is recalling European Butcher brand "Bacon Chuncks" from the marketplace because of possible Listeria monocytogenes contamination.

The recalled product was distributed in Ontario, CA.

This recall was triggered by test results. The Canadian Food Inspection Agency (CFIA) is conducting a food safety investigation, which may lead to the recall of other products. The CFIA is verifying that the industry is removing the recalled product from the marketplace.

There is concern that consumers may have unused portions of the recalled

product in their homes because the expiration rates run through October. Consumers can use the following information to determine whether they have the recalled bacon in their homes.

Brand	Product	Size	UPC	Codes
European Butcher	Bacon "Chuncks"	Variable (approx. 200 g)	Variable	Batch #30210 Best Before OC.15.21 and OC.22.21

As of the posting of this recall, there have been no reported illnesses associated with the consumption of this product.

Consumers should check to see if they have the recalled product in their home. Recalled products should be thrown out or returned to the store where they were purchased.

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 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.

Hundreds of tons of Italian meat recalled because of Salmonella outbreak

Three days after the CDC announced that Fratelli Beretta Italian meat products were linked to a Salmonella outbreak, the company has announced a nationwide

recall of more than 430 tons of one of its products.

Fratelli Beretta USA Inc. of Mount Olive, NJ, is recalling 24-ounce trays containing two 12-ounce packages of "Fratelli Beretta UNCURED ANTIPASTO PROSCIUTTO, SOPPRESSATA, MILANO SALAMI & COPPA" with best by dates of Aug 27, 2021, through Feb 11, 2022. The products are marked with the UPC number 073541305316 and have an establishment number "EST. 7543B" printed on the packaging next to the best by date.

The products are labeled as ready to eat, according to the recall announcement posted by the USDA's Food Safety and Inspection Service. The ready-to-eat (RTE) uncured antipasto meat trays were produced from Feb. 28, 2021, through Aug. 15, 2021. There are 862,000 pounds of product subject to this recall.

Because of the long shelf life of the meat product there is concern that consumers may have it in their homes. Consumers are advised to check the label information of any product they have on hand. If the codes match the recalled products the meat should immediately be thrown away or returned to the place of purchase.

The federal Centers for Disease Control and Prevention has been investigating a combined outbreak of Salmonella Infantis infections and an outbreak of Salmonella Typhimurium infections and found a link to Fratelli Beretta products. Combined, the outbreaks are responsible for 36 illnesses in 17 states with 12 hospitalizations and no deaths. As of Aug. 26 the data for the two outbreaks is being reported together because the investigations have been combined. No new cases have been reported since the previous notice on Aug. 24.

"Epidemiologic data show that Fratelli Beretta brand prepackaged "Uncured Antipasto" trays may be contaminated with Salmonella and may be making people sick," according to the CDC's outbreak alert.

Some ill people reported eating Fratelli Beretta brand uncured antipasto before they got sick and the traceback investigation confirmed that some of the ill people purchased uncured antipasto trays produced by Fratelli Beretta USA Inc., according to the CDC.

When available, the retail distribution list(s) will be posted on the FSIS website at www.fsis.usda.gov/recalls.

Consumers with questions regarding the recall can contact Fratelli Beretta USA Inc.'s recall hotline at 866-918-8738.

In 2017 Fratelli Beretta recalled product because of misbranding and undeclared allergens.

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 CDC.

Anyone who has eaten any of the recalled product 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.

CFIA testing leads to Enoki mushroom recall because of Listeria concerns

Covic International Trading Inc. is recalling Jongilpoom brand enoki mushrooms because of a possible Listeria monocytogenes contamination.

This recall was triggered by Canadian Food Inspection Agency (CFIA) test results.

The products were distributed in Alberta and British Columbia. The recall information does not include expiration dates.

Recalled product:

Brand	Product	Size	UPC	Codes
Jongilpoom	Enoki Mushroom	200 g	8 807076 000321	CE 158D

There have been no reported illnesses associated with the consumption of this product as of the posting of the recall notice.

Consumers should check to see if they have the recalled product in their homes. Recalled products should be thrown out or returned to the store where they were purchased.

About Listeria infections

Food contaminated with Listeria monocytogenes may not look or smell spoiled but can still cause serious and sometimes life-threatening infections. People who have eaten any recalled product 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 product should monitor themselves for 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.

Dressing sold at Aldi stores in 30 states recalled for risk of botulism poisoning

Drew's Organics LLC of Chester, VT, is recalling one lot code of Aldi Simply Nature Organic Poppy Seed Dressing because of a processing issue that could allow for microbial growth.

The recall was initiated after Drew's Organics observed a color difference in the Simply Nature Organic Poppy Seed Dressing after manufacturing. Investigation revealed out-of-specification pH with the potential for microbial growth, including Clostridium botulinum.

There is concern that consumers may have the dressing in their homes because of the long shelf life. Some of the product does not expire until 2023.

The recalled product was been distributed to select Aldi stores between Aug. 20 and Sept. 10 in the following states: Alabama, Arizona, California, Connecticut, Delaware, Georgia, Iowa, Illinois, Indiana, Kentucky, Massachusetts, Maryland, Michigan, Minnesota, Mississippi, North Dakota, New Hampshire, New Jersey, New York, Ohio, Oklahoma, Pennsylvania, Rhode Island, South Dakota, Tennessee, Texas, Virginia, Vermont, Wisconsin and West Virginia.

Consumers can use the following information to determine whether they ave the recalled dressing in their homes:

- The recalled product comes in 12 fluid ounce glass bottles.
- It has a "Best if Used By" date of Feb. 15, 2023.
- The UPC number is 4099100023169.
- The lot code is printed on the shoulder of the bottle above the label.

As of the posting of this recall, no illnesses related to this product have been reported.

Consumers should discontinue use of this product and return it to their place of purchase for a full refund.

About botulism

While a variety of food poisoning can result from eating under-processed food, one of the most dangerous is botulism poisoning. Untreated, botulism can paralyze the muscles needed for breathing, resulting in sudden death.

Anyone who has eaten any recalled products and developed signs of botulism poisoning should immediately seek medical attention, according to the U.S. Centers for Disease Control and Prevention (CDC).

"In foodborne botulism, symptoms generally begin 18 to 36 hours after eating contaminated food. However, symptoms can begin as soon as 6 hours after or up to 10 days later," according to the CDC website.

The symptoms of botulism may include some or all of the following: double vision, blurred vision, drooping eyelids, slurred speech, difficulty swallowing, difficulty breathing, a thick-feeling tongue, dry mouth, and muscle weakness. People with botulism poisoning may not show all of these symptoms at once.

These symptoms result from muscle paralysis caused by the toxin. If untreated, the disease may progress, and symptoms may worsen to cause paralysis of specific muscles, including those used in breathing and those in the arms, legs, and the body from the neck to the pelvis area. Many patients must be placed on ventilators to breath.

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