



RASFF

The **R**apid **A**lert **S**ystem
for **F**ood and **F**eed

2018 Annual Report

RASFF
Annual Report 2018

RASFF — The Rapid Alert System for Food and Feed — 2018 annual report

More information about RASFF — The Rapid Alert System for Food and Feed online:
http://ec.europa.eu/food/safety/rasff/index_en.htm

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Introduction

2019, the year in which this report appears, is an important year for the Rapid Alert System for Food and Feed (RASFF) network as it marks the 40th anniversary of the network. 2018, the year that this annual report gives an account of, has been a year of preparing the RASFF to give it a new boost. This boost is the implementation of the Information Management System for Official Control (IMSOC) concept that came with the new Official Controls Regulation (OCR)⁽¹⁾. A first step will be the merging of the Administrative Assistance and Cooperation (AAC) network with the RASFF network.

Following a Ministerial Conference⁽²⁾ in the wake of the fipronil incident, the **Member States and the Commission** agreed on 19 specific measures to reinforce the EU's action against food fraud⁽³⁾. In the meantime, the Commission has adopted a Commission Implementing Decision updating the General Plan for crisis management in the field of food and feed safety. The main purpose of this Plan is to protect public health by reinforcing cooperation and communication between the EU and Member States and to ensure a harmonised approach during food incidents or crises. With regard to IT developments for the RASFF and AAC systems, the actions taken are in line with the conclusions from the Ministerial Conference. As a first action, a Single Contact Point (SCP) in the Member States for both systems has been successfully implemented, the concept having been agreed upon in February 2018. In addition, an implementing act that is based on the OCR will soon legally cover the RASFF and AAC integration. In the meantime, the first version of this integrated IT system has been presented to the RASFF and AAC contact points with a positive feedback. It is planned to further extend this integration to the food fraud network although this network will maintain its important characteristic of being able to work as a “closed community”.

Unfortunately, fraudulent practices can never be completely ruled out but with the updates to the system since the fipronil incident, we have a better chance of finding problems earlier and dealing with them in an efficient and harmonised manner.

⁽¹⁾ Regulation (EU) 2017/625 of the European Parliament and of the Council of 15 March 2017 on official controls and other official activities performed to ensure the application of food and feed law, rules on animal health and welfare, plant health and plant protection products, *OJ L 95, 7.4.2017, p. 1–142*

⁽²⁾ https://ec.europa.eu/food/sites/food/files/safety/docs/rasff_fipronil-incident_conclusions_201709.pdf

⁽³⁾ http://europa.eu/rapid/press-release_STATEMENT-17-3486_en.htm. These measures were presented to the AGRIFISH Council on 9 October 2017 - <http://www.consilium.europa.eu/media/31740/st12959en17.pdf>

Preamble

Dear reader,

If you are familiar with the RASFF you may skip to the chapter on RASFF in 2018, but if you are unfamiliar with it or would like to know more, you are invited to go through this quick manual. Enjoy the report!

Acronyms used in this report:

AAC	Administrative Assistance and Cooperation System
AAC-AA	Administrative Assistance and Cooperation System in relation to the non-compliance cases not representation risks to public health
AAC-FF	Administrative Assistance and Cooperation System in relation to Food Fraud
ALARA	As Low As Reasonable Achievable principle
CFU	Colony-forming units
EC	European Commission
ECDC	European Centre for Disease Prevention and Control
EEA	European Economic Area
EFSA	European Food Safety Authority
EPIS-FWD	Epidemic Intelligence Information System for food- and Waterborne Diseases and zoonoses of ECDC
EU	European Union
FF	Food Fraud
HAV	Hepatitis A Virus
IMSOC	Information Management System for Official Control
iRASFF	RASFF's online platform
IT	Information Technology
MRL	Maximum Residue Levels
OCR	Official Control Regulation
OJ	Official Journal
PAH	Polycyclic Aromatic Hydrocarbons
PCBs	Polychlorinated Biphenyls
PFGE	Pulsed-Field Gel Electrophoresis
RASFF	Rapid Alert System for Food and Feed
ROA	Rapid Outbreak Assessment
SCP	Single Contact Point
TRACES	Trade Control and Expert System
TSEs	Transmissible Spongiform Encephalopathies
UK	United Kingdom
USA	United States of America
WGS	Whole Genome Sequencing

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A quick manual to the RASFF

The RASFF was put in place to provide food and feed control authorities with an effective tool to exchange information about measures taken responding to serious risks detected in relation to food or feed. This exchange of information helps Member States to act more rapidly and in a coordinated manner in response to a health threat caused by food or feed. Its effectiveness is ensured by keeping its structure simple: it consists essentially of clearly identified contact points in the Commission, the European Food Safety Authority (EFSA), the European Economic Area (EEA) and at national level in member countries exchanging information in a clear and structured way by means of an online platform called *iRASFF*.

The legal basis

The legal basis of the RASFF is Regulation (EC) No 178/2002 of the European Parliament and of the Council. Article 50 of this Regulation establishes the rapid alert system for food and feed as a network involving the Member States, the Commission as member and manager of the system and EFSA. Also, Switzerland and the EEA countries Norway, Liechtenstein and Iceland are longstanding members of the RASFF.

Whenever a member of the network has any information relating to the existence of a serious direct or indirect risk to human health deriving from food or feed, this information is immediately notified to the Commission under the RASFF. The Commission immediately transmits this information to the members of the network.

Article 50(3) of the Regulation lays down additional criteria for when a RASFF notification is required.

Without prejudice to other Community legislation, the Member States shall immediately notify the Commission under the rapid alert system of:

(a) any measure they adopt which is aimed at restricting the placing on the market or forcing the withdrawal from the market or the recall of food or feed in order to protect human health and requiring rapid action;

(b) any recommendation or agreement with professional operators which is aimed, on a voluntary or obligatory basis, at preventing, limiting or imposing specific conditions on the placing on the market or the eventual use of food or feed on account of a serious risk to human health requiring rapid action;

(c) any rejection, related to a direct or indirect risk to human health, of a batch, container or cargo of food or feed by a competent authority at a border post within the European Union.

Commission Regulation (EC) No 16/2011 lays down requirements for members of the network and the procedure for transmission of the different types of notifications. A distinction is made between notifications requiring rapid action (alert notifications) and other notifications (information notifications and border rejection notifications). Therefore, definitions of these different types of notifications are added. In addition, the role of the Commission as manager of the network is detailed.

The members

All members of the system have out-of-hours arrangements (24/7) to ensure that in case of an urgent notification being made outside office hours, on-duty officers can be warned, acknowledge the urgent information and take appropriate action. All member organisations of the RASFF, for which contact points are identified, are listed and their homepages can be consulted online at the following RASFF web page: https://ec.europa.eu/food/safety/rasff/members_en

The system

RASFF notifications

RASFF notifications usually report on risks identified in food, feed or food contact materials that are placed on the market in the notifying country or detained at an EU point of entry at the border with an EU neighbouring country. The notifying country reports on the risks it has identified, the product and its traceability and the measures it has taken.

According to the seriousness of the risks identified and the distribution of the product on the market, the RASFF notification is classified after verification by the Commission contact point as alert, information or border rejection notification before the Commission contact point transmits it to all network members.

- **alert notifications**

An 'alert notification' or 'alert' is sent when a food, feed or food contact material presenting a serious risk is on the market and when rapid action is or might be required in another country than the notifying country. Alerts are triggered by the member of the network that detects the problem and has initiated the relevant measures, such as withdrawal or recall. The notification aims at giving all the members of the network the information necessary to verify whether the concerned product is on their market, so that they can take the necessary measures.

Products subject to an alert notification have been withdrawn or are in the process of being withdrawn from the market. Member States have their own mechanisms to carry out such actions, including the provision of detailed information through the media if necessary.

- **information notifications**

An 'information notification' concerns a food, feed or food contact material for which a risk has been identified that does not require rapid action either because the risk is not considered serious or the product is not on the market at the time of notification.

Regulation (EU) No 16/2011 defines two sub-types of information notifications:

'information notifications for follow-up' are related to a product that is or may be placed on the market in another member country

'information notifications for attention' are related to a product that:

- (i) *is present only in the notifying member country; or*
- (ii) *has not been placed on the market; or*
- (iii) *is no longer on the market*

- **border rejection notifications**

A 'border rejection notification' concerns a consignment of food, feed or food contact material that was refused entry into the EU for reason of a risk to human health and also to animal health or to the environment if it concerns feed.

- **news notifications**

A news notification concerns any type of information related to the safety of food or feed which has not been communicated as an alert, information or border rejection notification, but which is judged interesting for the food and feed control authorities in member countries.

News notifications are sometimes based on information picked up in the media or forwarded by colleagues of food or feed authorities in third countries, EC delegations or international organisations, after having been verified with any member countries concerned.

- **original notifications and follow-up notifications**

A RASFF notification referring to one or more consignments of a food, feed or food contact material that were not previously notified to the RASFF is an 'original' notification, classified as alert, information or border rejection notification. In reaction to such a notification, members of the network can transmit 'follow-up' notifications which refer to the same consignments and which add information to the original notification such as information on hazards, product traceability or measures taken.

- **rejected and withdrawn notifications**

An original notification sent by a member of the RASFF can be rejected from transmission through the RASFF system, as proposed by the Commission after verification and in agreement with the notifying country, if the criteria for notification are not met or if the information transmitted is insufficient.

An original notification that was transmitted through the RASFF can be withdrawn by the Commission in agreement with the notifying country if the information upon which the measures taken are based turns out to be unfounded or if the transmission of the notification was made erroneously.

All information on the RASFF can be found on the website at: https://ec.europa.eu/food/safety/rasff_en

RASFF and AAC annual report 2018

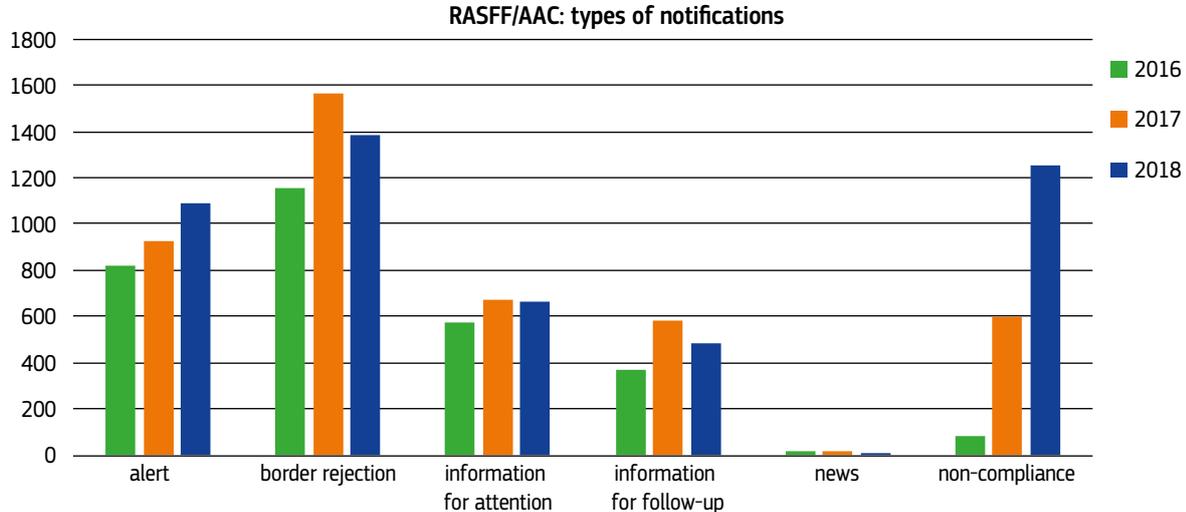
1. Integration of the Administrative Assistance and Cooperation network with the Rapid Alert System for Food and Feed

The AAC is a dedicated IT application known as the Administrative Assistance and Cooperation System (AAC) available to the Member States. The AAC is split into two instances, one dealing with non-compliances, classified as fraudulent activities along the agri-food chain (AAC-FF), and the other dealing with any other non-compliances (AAC-AA). For more information on the Food Fraud network, we refer to its [2018 Annual Report](#). Under the next

heading, information is provided on the activities of the AAC network, which integration with RASFF is imminent.

2. AAC notifications in 2018

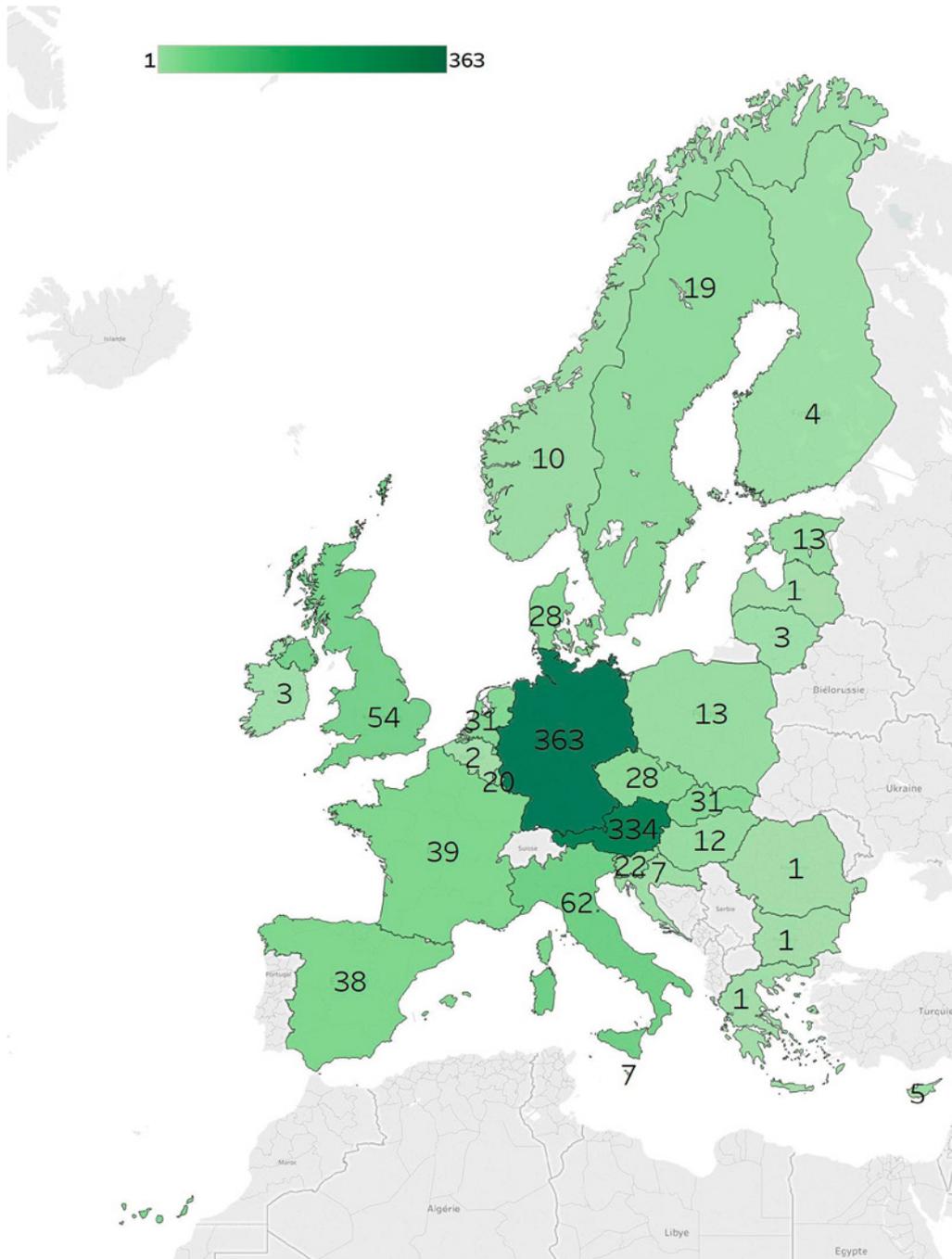
The chart below shows the evolution in the number of notifications in RASFF and in AAC in the period from 2016 to 2018. It reveals a rapid rise to significance for the non-compliance notifications reported through the AAC. Once the integration into iRASFF (the online platform of the RASFF network) is complete, the AAC network will benefit from a new feature (the conversation module) but also from the already long established procedure in RASFF and iRASFF using follow-up notifications.



The map below shows the number of notifications in AAC per notifying country in 2018. It is clear that there is an uneven use of the system. Countries such as Germany and Austria are using the system

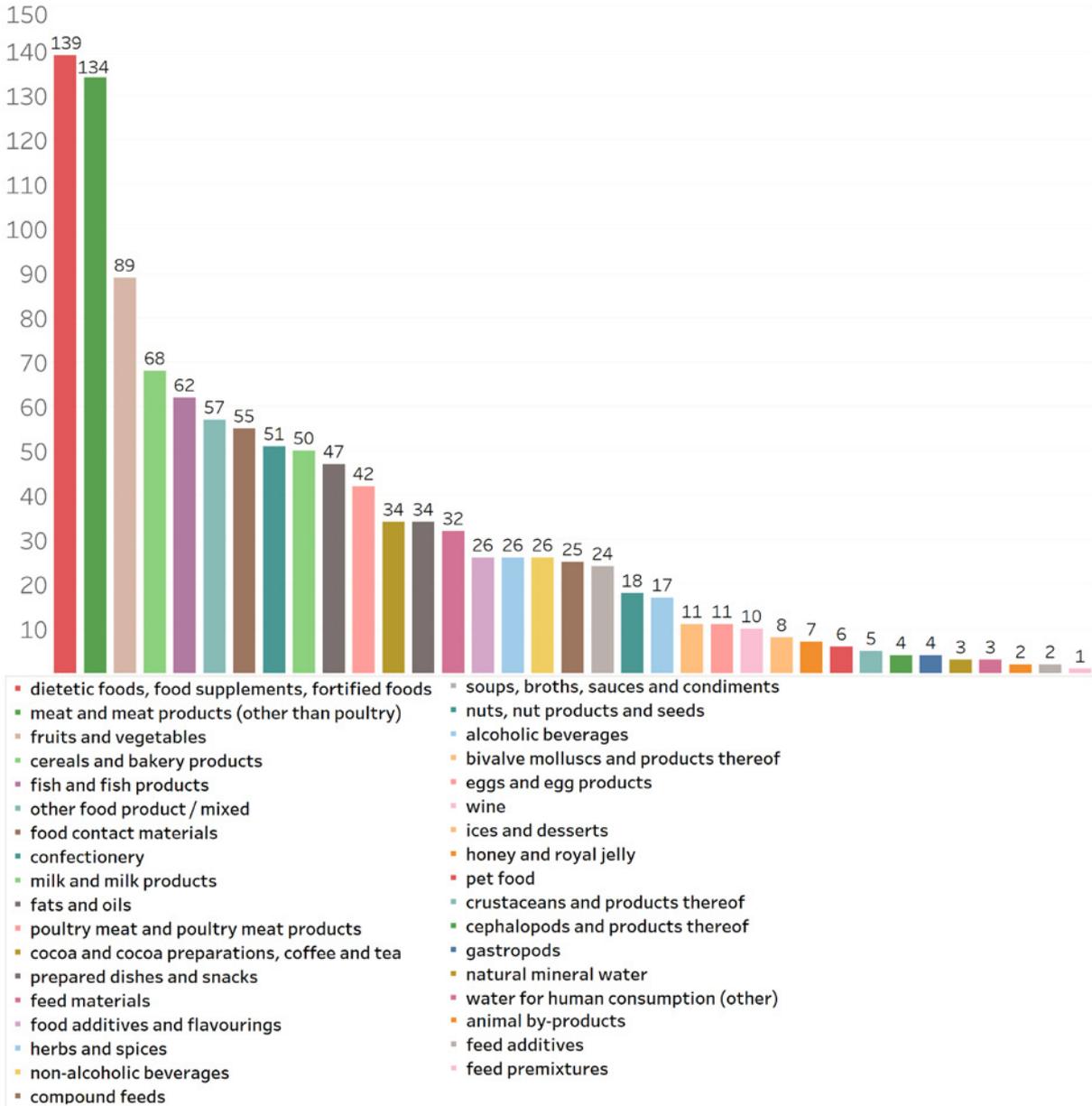
much more intensively than others. This demonstrates that the exchange of information under AAC still shows a very big growth potential.

AAC notifications per notifying country in 2018



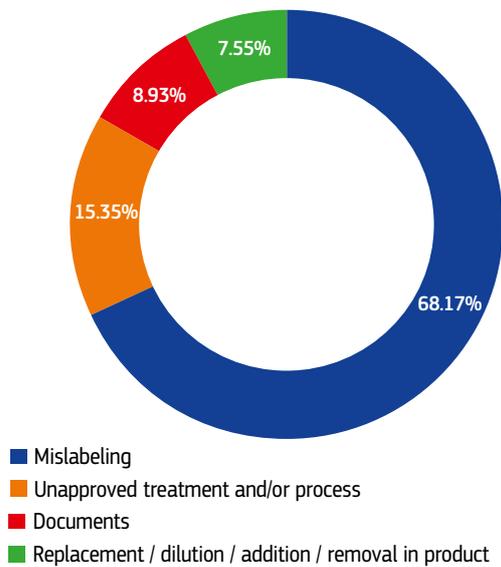
The chart below gives the number of AAC notifications per product category in 2018. The product categories were borrowed from RASFF and the

product categories notified roughly resemble what is notified in RASFF, although in AAC there are relatively more notifications about food supplements.



The donut chart below shows the number of AAC notifications per type of violation in 2018. Bearing in mind that a notification may relate to more than one violation, the classification of the notifications was done by taking into account the main alleged food law violations reported by Member States. Moreover, Member States can further specify violations outside the categories provided in the system.

AAC notifications per type of violation in 2018



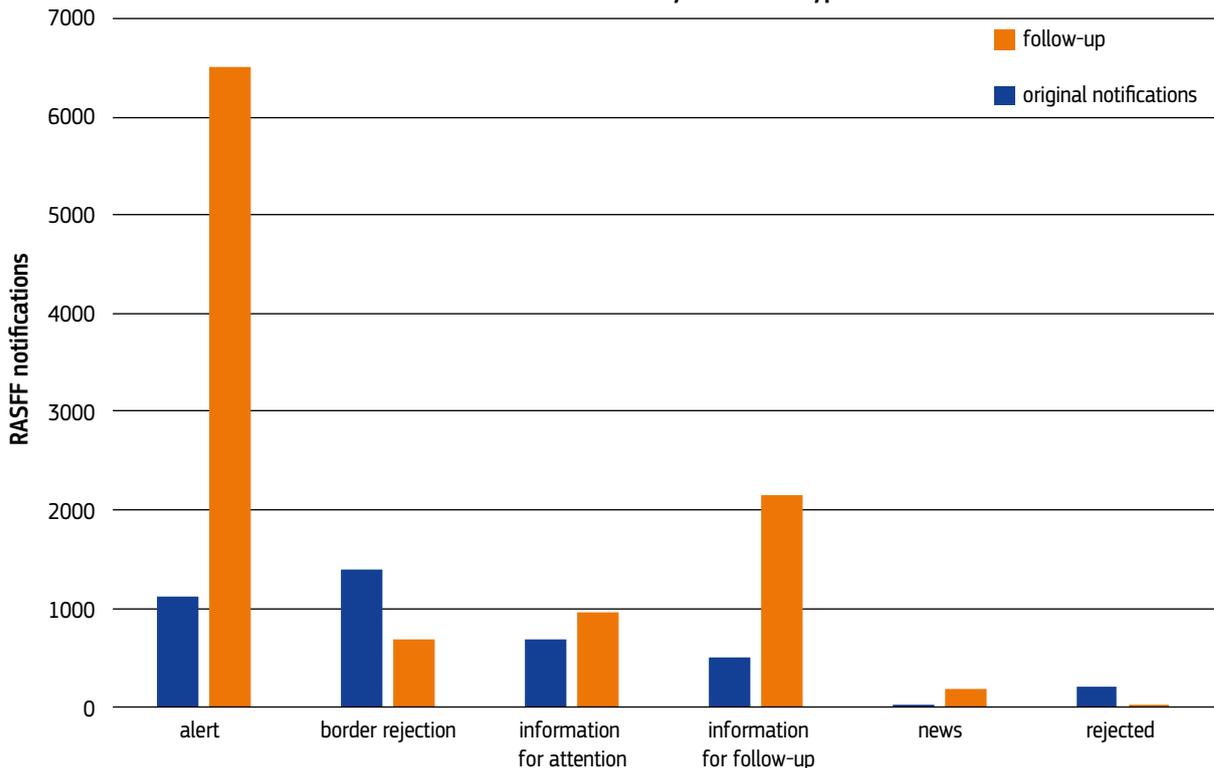
3. RASFF in 2018

RASFF notifications in 2018

In 2018, a total of 3699 **original notifications** were transmitted through RASFF, of which 1118 were classified as alert, 493 as information for follow-up, 675 as information for attention, 1401 as border rejection notification and 12 as news notification. These original notifications gave rise to 10484 **follow-up notifications**, representing an average of 2.8 follow-ups per original notification. For alert notifications this average rises to an impressive 5.8 follow-ups per original notification. Compared to 2017, the number of alert notifications, implying a serious health risk of a product circulating on the market, rose by 19% with 13% more follow-ups transmitted. The increase in alerts is significant for the fifth year in a row.

The overall figures present a small decrease of 4% in original notifications compared to 2017 (after a steep increase in 2017) and a 14% increase in follow-up notifications, resulting in a significant overall increase of 9%. **This shows that the overall number of notifications is stable while the reactivity and effective collaboration of our Member States around each original notification is clearly increasing.**

2018 RASFF notifications by class and type



The European Commission decided:

- after receipt of follow-up information, to withdraw⁽⁴⁾ 26 alert, 21 information and 14 border rejection notifications
- after consulting the notifying countries, not to transmit 206 notifications to the members of the network because, after evaluation, they were found not to satisfy the criteria for a RASFF notification (rejected notifications). This represents a 16% increase compared to 2017.

Withdrawn or rejected notifications are further excluded from tables and charts.

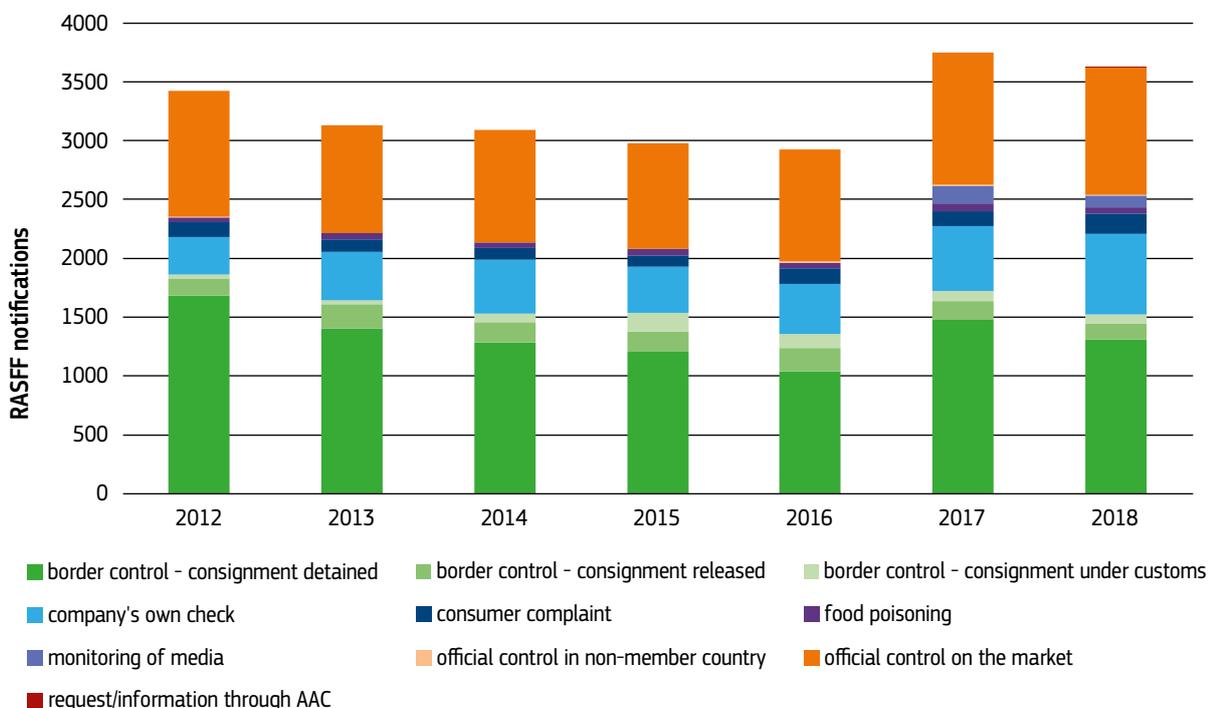
It brings the total exchanges in RASFF in 2018 to **14471**, a number that has never been higher. This continued increase in activity challenges the RASFF network to maintain the same level of efficiency or do even better.

Where do RASFF notification come from?

The largest category of notifications concerns official controls on the (internal) market⁽⁵⁾. An official

control is typically carried out at a business operator (manufacturer, wholesaler, storage, retailer etc.) and involves an inspection and possibly also a sample taking for the purpose of analysis. Three special types of notifications are identified: when a consumer complaint, a company notifying the outcome of an own check, or a food poisoning was at the origin of the notification.

In 2018, 42% of RASFF notifications concerned controls at the outer EEA borders⁽⁶⁾ at points of entry or border posts. When the consignment was not accepted for import (“border control – consignment detained”) a border rejection notification was made. In some cases, a sample was taken for analysis at the border yet the consignment was not held there but was forwarded to its destination under customs’ seals (“border control – consignment under customs”). This means that it should remain stored there until the result of the analysis is available. In other cases the consignment was released (“border control - consignment released”) without awaiting the analytical result, which means that the consignment would need to be retraced if the result is unfavourable and the product needs to be withdrawn from the market. Therefore, the latter cases lead to alert or information notifications.



⁽⁴⁾ Data taken early January 2018, prone to have changed in the real-time RASFF system

⁽⁵⁾ Products placed on the market in one of the member countries including the EEA countries Norway, Liechtenstein and Iceland.

⁽⁶⁾ Since 2009, including Switzerland.

A small number of notifications were triggered by an official control in a non-member country. If a non-member country informs a RASFF member of a risk found during its official controls concerning a product that may be on the market in one of the member countries, the RASFF member may notify this to the Commission for transmission to the RASFF network. In 2018, there were six RASFF notifications (of which two news notifications) reporting on checks carried out in non-member countries. Below you will find more details regarding some of the notifications transmitted:

- 2018.0104 – information notification for follow-up - residue level above MRL for oxytetracycline (112.63 µg/kg - ppb) in frozen Atlantic salmon fillets of aquaculture origin from Chile: Chile informed Germany of this non-compliance at which point Germany used the RASFF notification to inform Denmark where the recipient of the consignment was located.
- 2018.0461 – alert notification - *Salmonella* enterica ser. Typhimurium (in 9 out of 10 samples /25g) in fuet from Spain Andorra informed the Commission and Spain about this finding after which the Commission made a RASFF notification for Spain to investigate and report back. Spain provided information about their actions taken and about distribution of suspected batches to France and to Germany.
- 2018.0913 – news notification - foodborne outbreak (*Salmonella*) caused by food products containing kratom (*Mitragyna speciosa*) Italy pointed the Commission to information about an outbreak of Salmonellosis linked to products reportedly containing kratom in the USA. Kratom is a plant that grows naturally in Thailand, Malaysia, Indonesia, and Papua New Guinea. Italy reported that kratom-containing products from the USA could have been imported or marketed through e-commerce platforms in Europe. Therefore, the Commission asked member countries to share any information on possible health risk linked with these products originating from the USA or distribution of these products to the EU through this RASFF news. No information of such distribution was however received. Through the Epidemic Intelligence Information System for Food and Waterborne Diseases and Zoonoses (EPIS-FWD) tool, managed by the European Centre for Disease Prevention and Control (ECDC), information on the case was also exchanged but no links were reported to human cases in Europe.
- 2018.1654 – alert notification - presence of gluten in gluten free bread mix from Poland The Canadian authorities contacted Sweden and Poland regarding a recall in Canada of a bread mix marketed as gluten free in which gluten had been found. The product was manufactured in Poland for a company based in Sweden. Polish authorities reported that some batches of the product contained baking powder with wheat flour and identified the recipients in Sweden and in Canada.
- 2018.2069 – alert notification - histamine (2200; 2600 mg/kg - ppm) in anchovy fillets with olive oil from Italy Hong Kong had emailed Italy to inform about two non-compliant types of anchovy fillets from Italy. Italy found further distribution of the suspect batches to Austria, France, Germany and Slovakia and to the USA. The immediate withdrawal of the product was imposed with prompt notification to the customers concerned.

RASFF incidents in 2018

RASFF incidents are made up of more than one notification. In order to identify such an incident, the notifications need to have a “strong link” e.g. they share the same upstream traceability for two similar (but not identical) products or they are about identical products but different lots. Findings about the same lot of a product should be, in principle, grouped under the same notification with new findings being reported as follow-up notifications.

The following types of incidents are identified:

Type of incident	Number of incidents		Number of notifications	
	2018	2017	2018	2017
accidental or environmental contamination	17	9	49	24
faulty labelling, processing or storage conditions	2	3	5	16
foodborne outbreak	6	6	30	18
foreign body contamination / physical danger	7	2	16	4
fraud investigation	1	2	3	5
hazardous or unauthorised composition	11	19	30	41
intentional contamination / tampering	0	0	0	0

Accidental or environmental contamination

This incident type involves most contamination events as it fortunately only rarely happens that a contamination is induced deliberately in the food chain. The nature of the contamination can be either chemical or (micro)biological.

Examples from the 2018 collection:

- *Listeria monocytogenes* in raw milk cheeses from the same producer in France. One year later, another incident related to a whole variety of cheeses, again contaminated with *Listeria monocytogenes*. This time the authorities decided to close the establishment.
- Aflatoxins in groundnuts from Argentina having been checked after import in the Netherlands in 2017 with the consignment (wholly or partially) redirected for feed to Germany. These notifications were reported very late and appear to be based on company own-checks at recipient in the Netherlands. Also afterwards, many notifications continue to be reported by the Netherlands not based on border checks but on systematic checking by recipient after clearance at the border. Typically, the levels of aflatoxins reported are low but still exceeding the legal limit.

Faulty labelling, processing or storage conditions

This is where an element of the “logistics” chain went wrong and led to risks in the food or feed. Typically, most incidents reported under this type would relate to labelling mistakes leading to undeclared allergens. It could be that several notifications about products with undeclared allergens can be traced back to the same labelling defect.

Example for the 2018 collection:

- Undeclared presence of wheat in different brands of corn chips from the same Belgian producer, some of which were labelled as “gluten-free”.

Foodborne outbreak

A foodborne outbreak can be reported in a single RASFF notification or through several notifications linked to one particular outbreak event, in which case an incident of this type is identified.

In 2018, we identified 59 notifications triggered by a food poisoning event. In this report, the term

“food poisoning” refers to anything that triggers an adverse reaction. Not only pathogenic bacteria or viruses but also chemical contamination, harmful composition of a food or the presence of an allergenic substance that is not labelled, so long as the notifying country has reported that consumers were affected by consumption of the food.

From the table above you could already see that 30 notifications were linked with foodborne outbreak incidents. In total, 58 notifications related to foodborne outbreaks in 2018. From these 13 identified *Salmonella* as the (probable) cause and 12 identified norovirus. Some notifications reported on follow-on investigations after the outbreak.

In the event of a multi-country foodborne outbreak, coordination at the EU level is important. A Rapid Outbreak Assessment (ROA) is jointly prepared by EFSA and ECDC in close cooperation with affected countries. The ROA gives an overview of the situation in terms of public health and identifies the contaminated food vehicle that caused the infections. It also includes trace-back and trace-forward investigations to identify the origin of the outbreak and where contaminated products have been distributed. This is crucial to identify the relevant control measures in order to put an end to the outbreak. Multi-country foodborne outbreaks in 2018, most of which have led to a ROA, are reported below:

- **Multi-country foodborne outbreak of *Listeria monocytogenes* IVb, ST6 (RASFF news 17-849, alert notifications 2018.0216, 2018.1891, 2018.1933, 2018.1955, 2018.1958, 2018.1977, 2018.1998, 2018.1999, 2018.2042, information notification 2018.2113):** An outbreak of invasive *Listeria monocytogenes* infections confirmed by whole-genome sequencing (WGS) and linked to frozen corn and possibly to other frozen vegetables had been ongoing in five EU Member States since 2015. Traceability information for the contaminated products pointed to the source of contamination in a freezing plant in Hungary. Food business operators in the Member States have withdrawn and recalled the implicated frozen products from 2016 production onwards. Hungary informed that the implicated company had implemented several corrective actions and that the producer was capable to freeze products free of the *Listeria monocytogenes* outbreak strain from 14 August 2018.

The joint ECDC-EFSA [ROA](#) was published on 22 March 2018 and updated on 3 July 2018. Further information concerning this outbreak is available in the RASFF annual report 2017, page 12.

- **Multi-country outbreak of *Salmonella Agona* infections possibly linked to ready-to-eat food (information notification 2018.1343):** On 4 May 2018, the United Kingdom (UK) transmitted a RASFF information notification concerning a foodborne outbreak of *Salmonella Agona* in the UK. Through WGS analysis *Salmonella Agona* food isolates, detected in ready-to-eat products from the UK containing cucumber, were found to be closely genetically related to the human strains. Although the cucumbers used in all final contaminated products originated from Spain for a limited period (November/2017-April/2018), no connection between supply chains could be identified: primary producers of cucumbers were different and cucumbers were delivered to different processing companies through different distributors in the UK. All cucumber samples, taken either at primary production level in Spain or during distribution to/within UK, were *Salmonella* negative. For this reason, it has not been possible to identify the specific point in the production chain where the contamination occurred.

On 26 July 2018 the joint ECDC-EFSA [ROA](#) was published.

- **Multi-country outbreak of *Listeria monocytogenes* sequence type 8 infections linked to consumption of salmon products (2017.1319, 2017.1546):** A multi-country outbreak caused by *Listeria monocytogenes* sequence type (ST) 8 was identified through WGS analysis in three Member States: Denmark, Germany and France. In August 2017, an alert notification and an urgent inquiry in the EPIS-FWD platform was issued by Denmark concerning isolates of *Listeria monocytogenes* ST8 in batches of cold smoked salmon closely related to a Danish human outbreak strain. The Danish epidemiological, microbiological and food investigations provided evidence that the outbreak was associated with consumption of salmon products

produced in Poland, reared in Norway and distributed in Denmark by two different Norwegian exporters. In October 2017, France reported the identification of a matching *Listeria monocytogenes* strain, as confirmed by WGS analysis, in food isolates from marinated salmon originating from the same Polish processing company. The suspected batches were recalled from consumer and withdrawn from the market. Given some irregularities found at the Polish processing company, control measures were implemented. Following the implementation of corrective measures, new samples were taken and no irregularity was found. Due to the lack of the detailed information on the Norwegian primary producers of the salmon used in the contaminated batches and due to the lack of WGS data on the isolates found in the environmental and food samples taken at the Polish processing plant, unfortunately it has not been possible to identify the exact source of the contamination.

On 25 October 2018 the joint ECDC-EFSA [ROA](#) was published.

- **Multi-country cluster of *Listeria monocytogenes* serogroup IIc-infections possibly linked to salmon products (2015.1464, 2015.1619, 2016.1258, 2016.1290):** A multi-country cluster of invasive listeriosis caused by *Listeria monocytogenes* serogroup IIc has been verified by WGS between 2010 and 2018 in three countries: Denmark, France and Germany. WGS analyses performed in Germany and France revealed that 68 *Listeria monocytogenes* serogroup IIc food isolates are closely related to the representative human cluster strain and originated from 49 batches of smoked or gravad salmon. These batches originated from three processing plants in three Member States: France, Germany and Poland. Joint analysis of the WGS results from food and human isolates indicated a microbiological link between the *Listeria monocytogenes* isolates obtained from salmon products and the German representative cluster strain, suggesting a common source related to salmon products since 2014. However, this hypothesis could not be validated by epidemiological investigation due to the limited information available

about consumption of salmon products by the patients involved in the cluster.

- **Salmonella Newport cases, possibly associated with French goats' cheese (2018.2296):** On 10 August 2018, France launched a RASFF notification reporting four foodborne outbreaks of salmonellosis possibly caused by goat raw milk cheese produced in France. The French producer immediately decided to withdraw and recall the suspected lots and a national press release was published. Shortly after, France reported an increase of cases related to *Salmonella* Newport detected by two different French surveillance systems. In response to the French report in EPIS-FWD, Scotland reported three cases of *Salmonella* Newport ST118, the same 7-gene sequence type as for the French cases. Two of the Scottish patients also reported consumption of the same goats' cheese described in the RASFF notification. On 27 August, France informed that PFGE analysis confirmed the presence of the serotype Newport in three food isolates also in lots not suspected. For this reason, the French competent authorities decided to extend the withdrawal and recall to the entire production of the goat raw cheese produced by the French company and published a new press release. The products were distributed to EU/EEA countries and to third countries. The implemented control measures helped to significantly reduce the risk for new infections. No new cases were reported.

-Multi-country hepatitis A sub-genotype 1B outbreak linked to frozen strawberries products (2018.1813): After having launched a request in the EPIS-FWD, Sweden transmitted a RASFF alert about a foodborne outbreak of hepatitis A virus (HAV), suspected to be caused by strawberries from Poland in June 2018. In September 2018, Sweden confirmed that the identical HAV sub-genotype 1B strain detected in humans had been identified in the implicated batch of frozen strawberries originating from Poland that was sampled at the Swedish supplier. According to the HAV analytical results reported by Poland, the sample from the

suspected batch collected at the Polish company was HAV negative, as well as the other tested batches from season 2017. However, Austria and Germany reported identical cases to the outbreak cluster in EPIS-FWD. By the end of November 2018, while the outbreak was considered over in Sweden and Austria, cases continued to be reported in Germany. Austria and Germany did not report any HAV contaminated strawberries in RASFF. The suspected batch of strawberries from Poland was recalled in Sweden.

Foreign body contamination / physical danger

It is clear that this type of incident is reserved for physical hazards. This is typically the case for an unintentional foreign body contamination but it can also be about the characteristics of a product leading to a risk, e.g. the addition of gelling additives to mini fruit cups leading to a suffocation risk.

Fraud investigation

These are incidents that could also fall under the other incident types but are given this type to emphasise the (potential) fraud element of the investigation that spans several notifications.

Hazardous or unauthorised composition

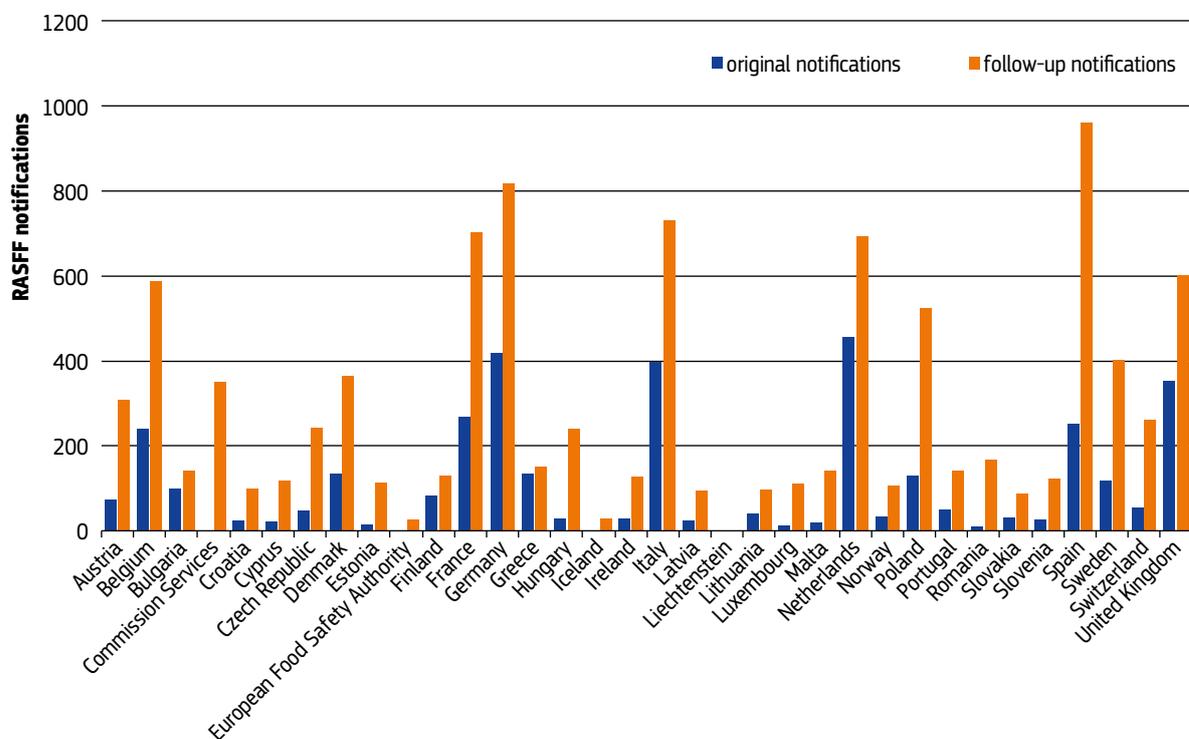
In this type of incident, an ingredient or additive lies at the basis of the health risk.

Examples from the 2018 collection:

- Undeclared sulphite in chlorella powder from the same Chinese operator (6 notifications): it turned out that sulphite could naturally occur in such product and some countries reported not to take any measures as there would not be a health risk with the quantities to which the consumer was exposed.
- Unauthorised substances sildenafil thiono analogues in food supplement traded by a Slovakian operator (5 notifications).

RASFF notifications by notifying country in 2018

Original and follow-up notifications by notifying country in 2018



Top 10 number of notifications by notifying country

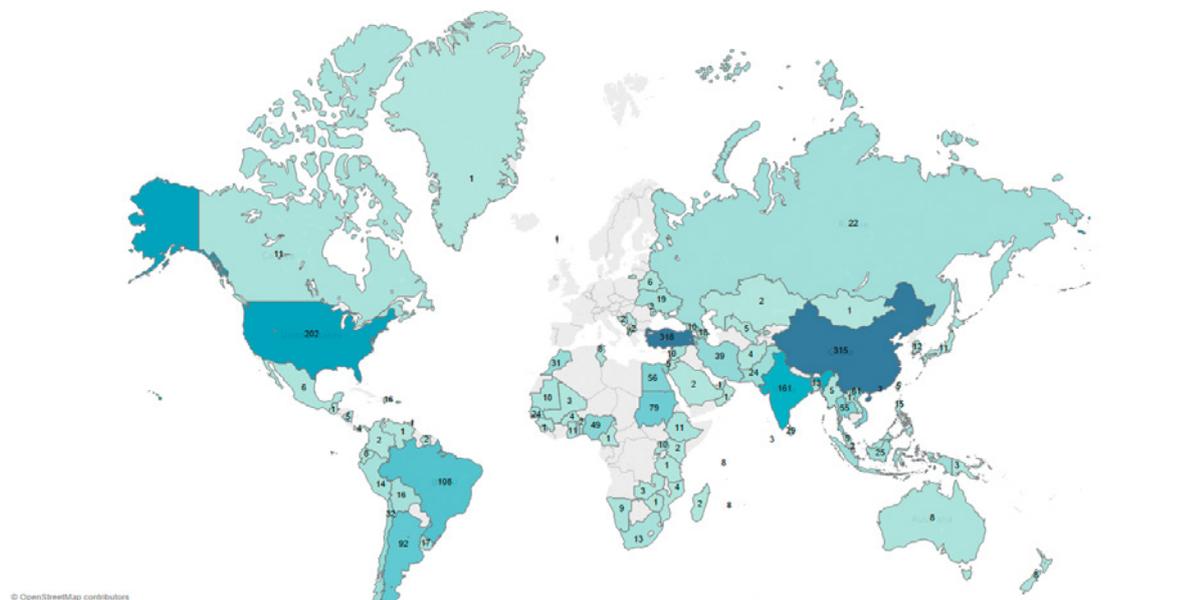
Number of notifications counted for each combination of hazard/product category/notifying country.

hazard	product category	notifying country	notifications
aflatoxins	nuts, nut products and seeds	Netherlands	126
aflatoxins	nuts, nut products and seeds	Germany	65
aflatoxins	nuts, nut products and seeds	Spain	51
2,4-dinitrophenol (DNP)	dietetic foods, food supplements, fortified foods	United Kingdom	41
Salmonella	poultry meat and poultry meat products	Netherlands	40
aflatoxins	nuts, nut products and seeds	Italy	40
mercury	fish and fish products	Italy	34
Salmonella	nuts, nut products and seeds	Greece	34
aflatoxins	nuts, nut products and seeds	United Kingdom	32
parasitic infestation with Anisakis	fish and fish products	Italy	30

Country fact sheets

 Austria	 Germany	 Netherlands
 Belgium	 Greece	 Norway
 Bulgaria	 Hungary	 Poland
 Croatia	 Iceland	 Portugal
 Cyprus	 Ireland	 Romania
 Czech Republic	 Italy	 Slovakia
 Denmark	 Latvia	 Slovenia
 Estonia	 Lithuania	 Spain
 Finland	 Luxembourg	 Sweden
 France	 Malta	 United Kingdom
		 Switzerland

Origin non-member countries in 2018



Top 10 number of notifications by country of origin

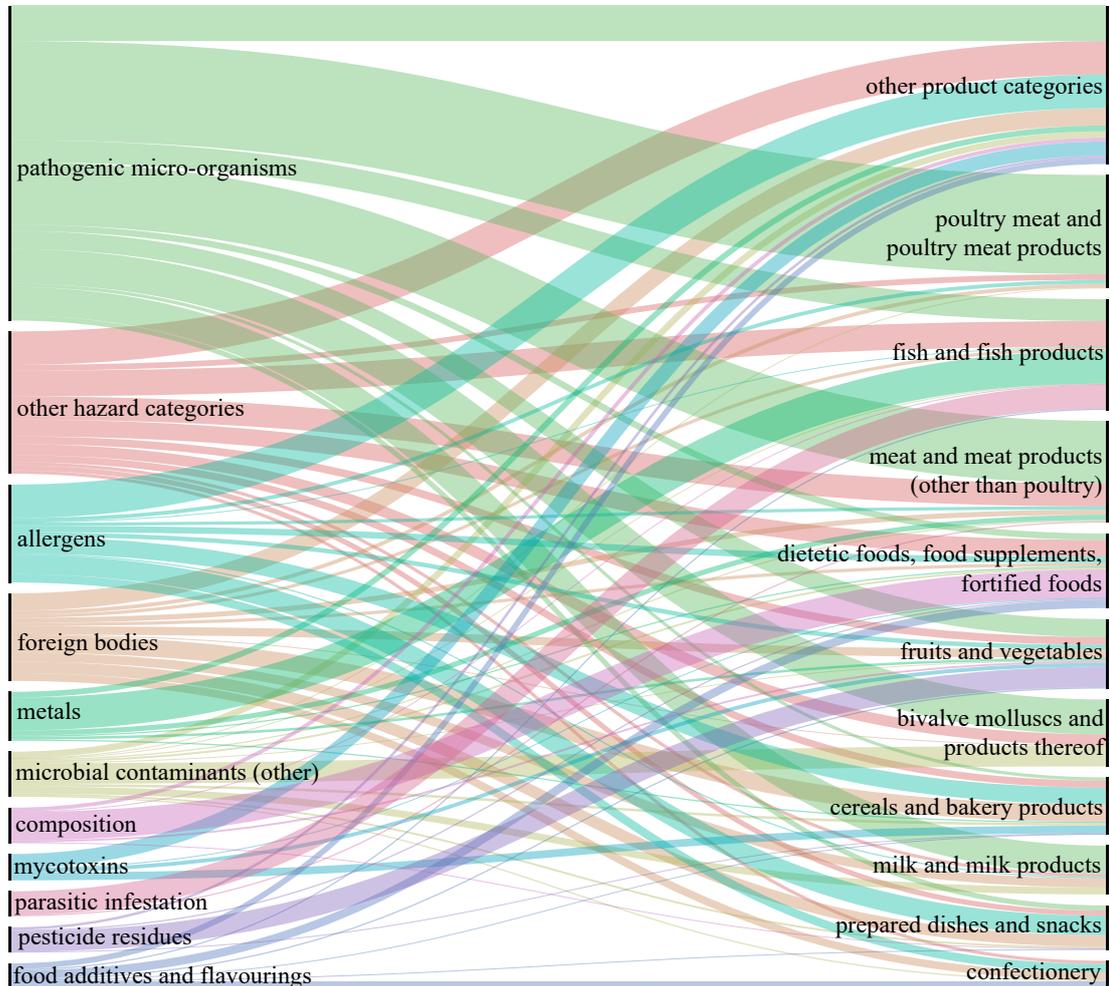
Number of notifications counted for each combination of hazard/product category/country.

hazard	product category	origin	notifications
aflatoxins	nuts, nut products and seeds	United States	85
aflatoxins	nuts, nut products and seeds	Turkey	77
aflatoxins	nuts, nut products and seeds	Argentina	60
Salmonella	poultry meat and poultry meat products	Brazil	58
ochratoxin A	fruits and vegetables	Turkey	40
mercury	fish and fish products	Spain	39
aflatoxins	nuts, nut products and seeds	China	39
norovirus	bivalve molluscs and products thereof	France	35
aflatoxins	nuts, nut products and seeds	Egypt	35
Salmonella enterica ser. Enteritidis	poultry meat and poultry meat products	Poland	34
Salmonella	nuts, nut products and seeds	Sudan	34

In the following sections, using alluvial diagrams, the most frequently reported hazard and product categories are analysed for food, feed and food contact materials separately. The “top” hazard categories are explored in more detail, while

identifying recurrent issues (more than 10 notifications for the same hazard, product and country of origin combination) and operators (operators notified in RASFF three times or more in a three-month period).

2018 top 10 hazard and product categories on food products originating from member countries

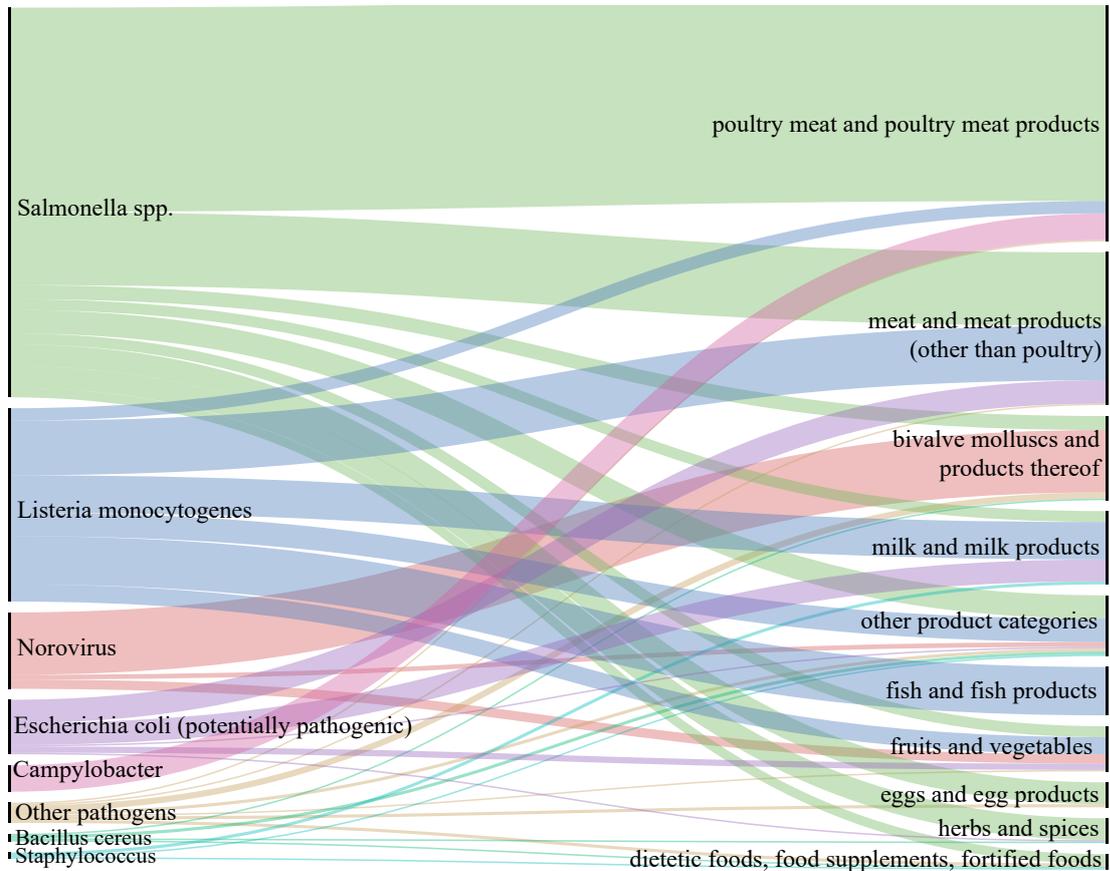


Pathogenic microorganisms

492 notifications

The alluvial diagram above shows that a significant part of the RASFF notifications on products from

member countries concern pathogenic micro-organisms in food of animal origin mostly. The diagram below provides more detail about this. There has been a 19% increase in notifications on pathogenic micro-organisms in 2018 compared to 2017.



Salmonella

Salmonella is still the most frequently reported pathogen in food from member countries (246 notifications, up by 19%) but the same goes for non-member countries (304 notifications, see later in this report). Meat is taking up the bulk of the notifications, poultry meat in particular because of the food safety criterion for absence of *Salmonella* Typhimurium and Enteritidis in fresh poultry meat.

Recurrent notifications:

There were 47 notifications on *Salmonella* in poultry products originating from Poland, most often (34 notifications) concerning *Salmonella* Enteritidis in fresh poultry. Two operators were identified as recurrent.

Listeria monocytogenes

The diagram above reveals that *Listeria monocytogenes* contamination is mostly found on foods of animal origin. Nevertheless, the major multi-country foodborne outbreak related to frozen corn in 2018 reminded that *Listeria* contamination may be very relevant in other foods as well, in particular in foods that are not heat treated before consumption. *Listeria monocytogenes* is particularly dangerous and even lethal for persons with weakened immune system.

Recurrent notifications

Listeria monocytogenes was notified 13 times in cheese from France (often made from raw milk). There were no recurrent operators.

Norovirus

There were 47 notifications (up 100%!) concerning norovirus, 34 of which reported norovirus in live oysters from France, with no less than six recurrent operators. There were 6 notifications on norovirus in different kinds of berries.

Shigatoxin-producing *Escherichia coli*

Shigatoxin-producing *Escherichia coli* (28 notifications) can cause foodborne illness because of its capacity to produce toxins. As the capacity of the strain to really cause illness depends on several factors, it is not straightforward to estimate the risk a contamination poses to health. The contamination

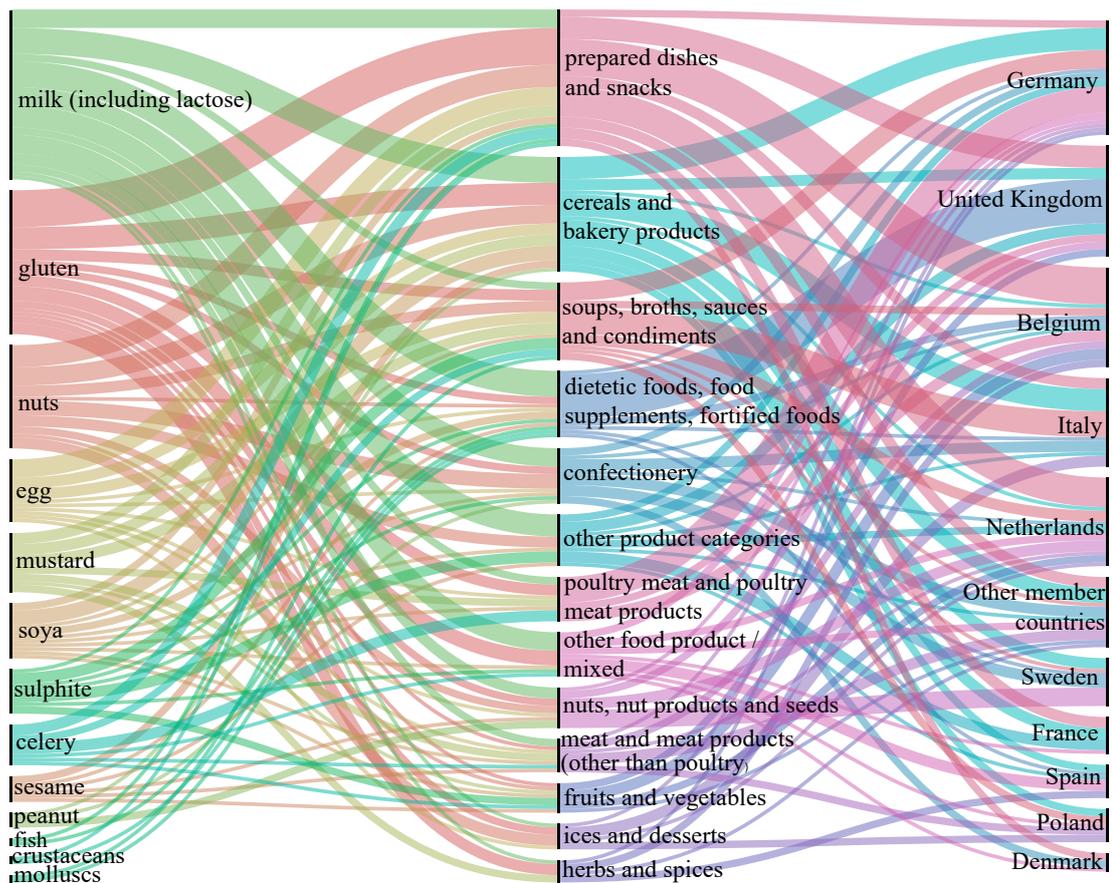
is of animal or human origin and therefore is most often found on (non-heat treated) meat products (14 notifications) and cheeses (8 notifications).

Allergens

149 notifications (up by 31%)

Milk, gluten and nuts are the most commonly reported allergens. Prepared dishes and snacks are most often notified. Not all allergen issues are harmonised in EU legislation. Quite often, traces of allergens are notified, occurring in foods due to cross-contamination e.g. on the same production lines as other products containing allergens. Such occurrence of allergens is not regulated at EU level.

Allergens notified in 2018, set out against food product category set out against member country of origin



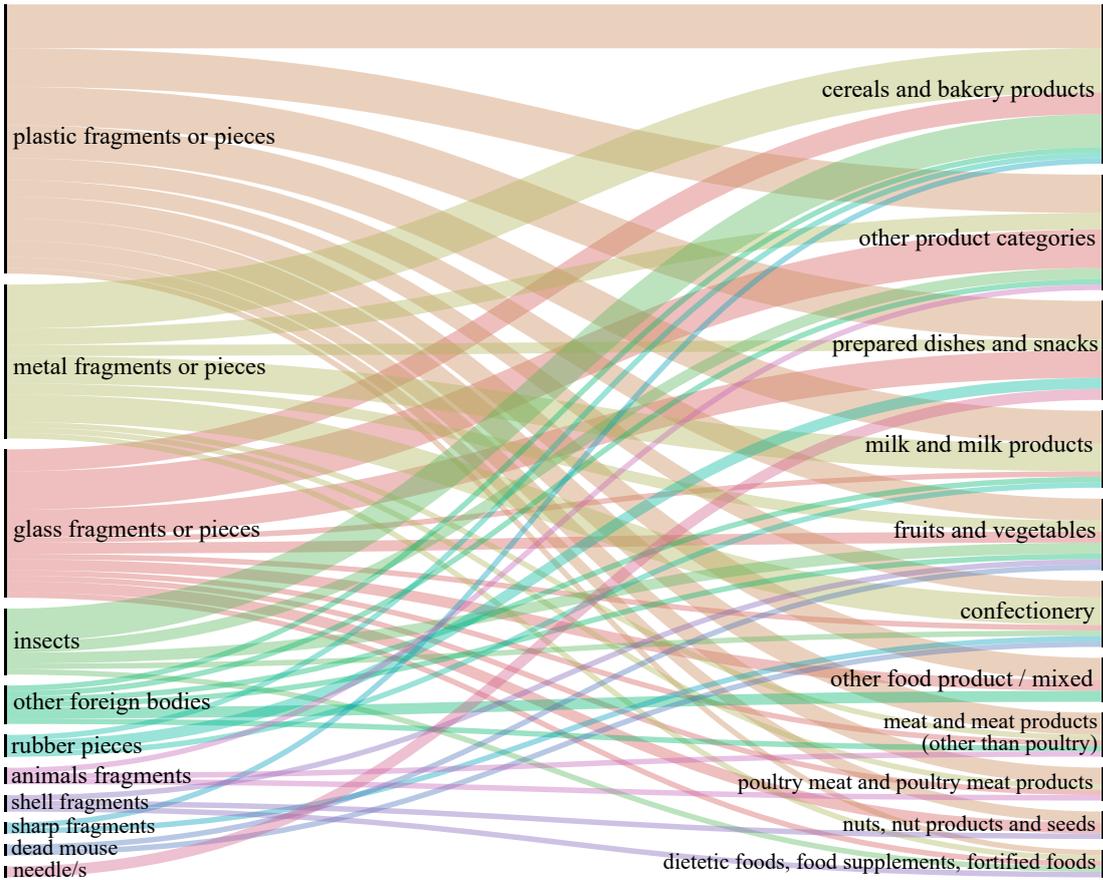
Foreign bodies

136 notifications (up by 36%)

The three most frequently notified types of foreign bodies are plastic, metal and glass. Such hard materials found in food (most often reported

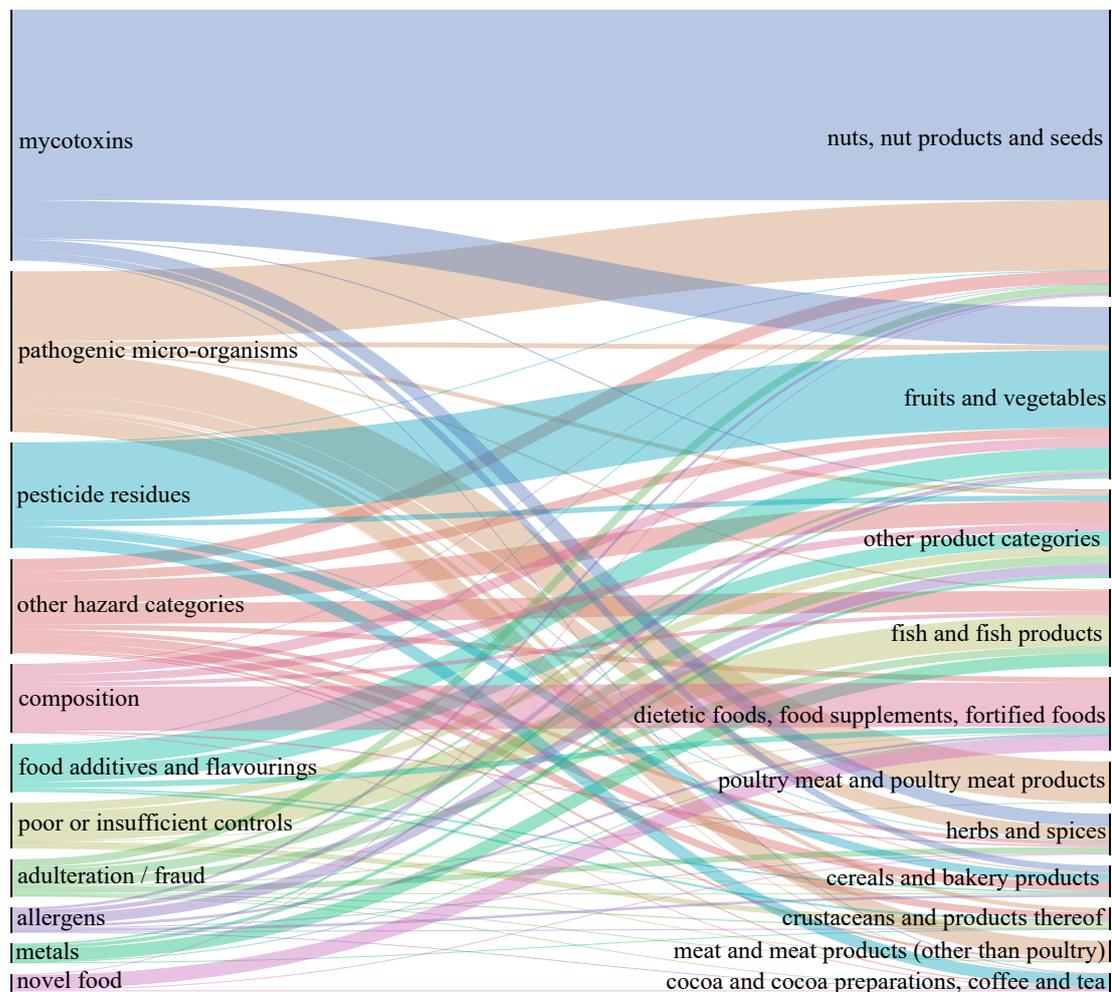
through consumer complaints) pose a risk due to injury of the digestive tract. They are typically found in ground or bulk raw materials such as cereals or flours or in processed foods due to a contamination during production. Glass fragments are often found in products packaged in glass, where damage to the jars at some stage has led to contamination.

Types of foreign bodies set out against food product category



2018 top 10 hazard and product categories on food products originating from non-member countries

As usual, issues on mycotoxins and pathogenic micro-organisms are the top issues for products from non-member countries, where mycotoxins resume their place as the most reported type of hazard.



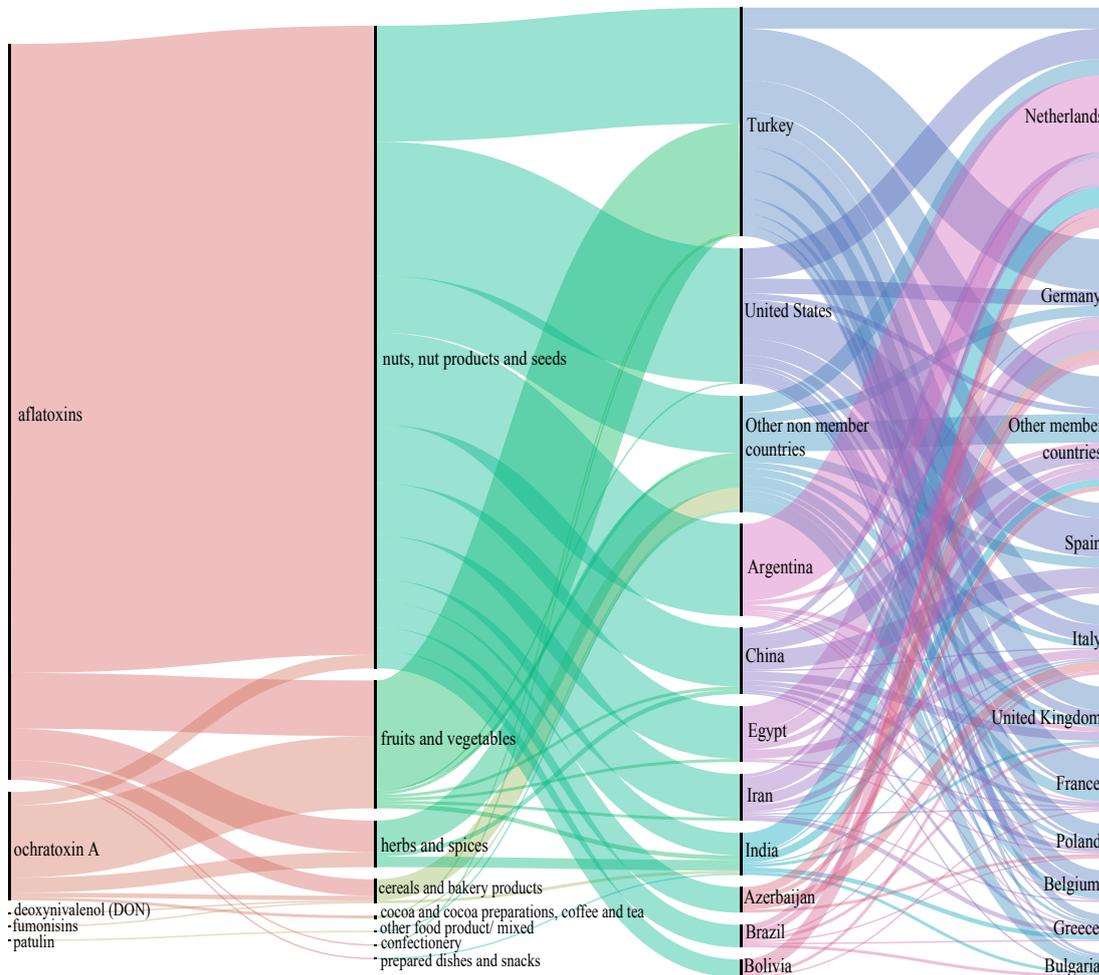
Mycotoxins

569 notifications

Mycotoxin levels in food usually do not produce an acute adverse effect on consumers but chronic exposure may pose a significant risk to consumers

who are eating these products frequently, in particular for aflatoxins. Aflatoxin B1 is a carcinogenic and genotoxic substance, for which there is no real safe level of intake. For this reason the ALARA principle is applied and the legal limit enforced is as low as reasonable achievable.

Mycotoxin types notified in 2018, set out against food product category, set out against non-member country of origin set out against notifying country



Aflatoxins

Recurrent notifications are:

- groundnuts from Argentina – 60 notifications (of which 49 border rejections)
- hazelnuts from Turkey – 40 notifications (of which 35 border rejections)
- pistachio nuts from Turkey – 24 notifications (of which 22 border rejections)
- dried figs from Turkey – 34 notifications (of which 27 border rejections)
- pistachio nuts from the USA – 40 notifications (of which 32 border rejections)
- almonds from the USA – 32 notifications (of which 31 border rejections)
- groundnuts from the USA – 14 notifications (all of which are border rejections)
- groundnuts from China – 39 notifications (of which 38 border rejections)
- groundnuts from Egypt – 37 notifications (all of which are border rejections)
- pistachio nuts from Iran – 29 notifications (of which 26 border rejections)
- hazelnuts from Azerbaijan – 16 notifications (all of which are border rejections)
- groundnuts from India – 15 notifications (all of which are border rejections)

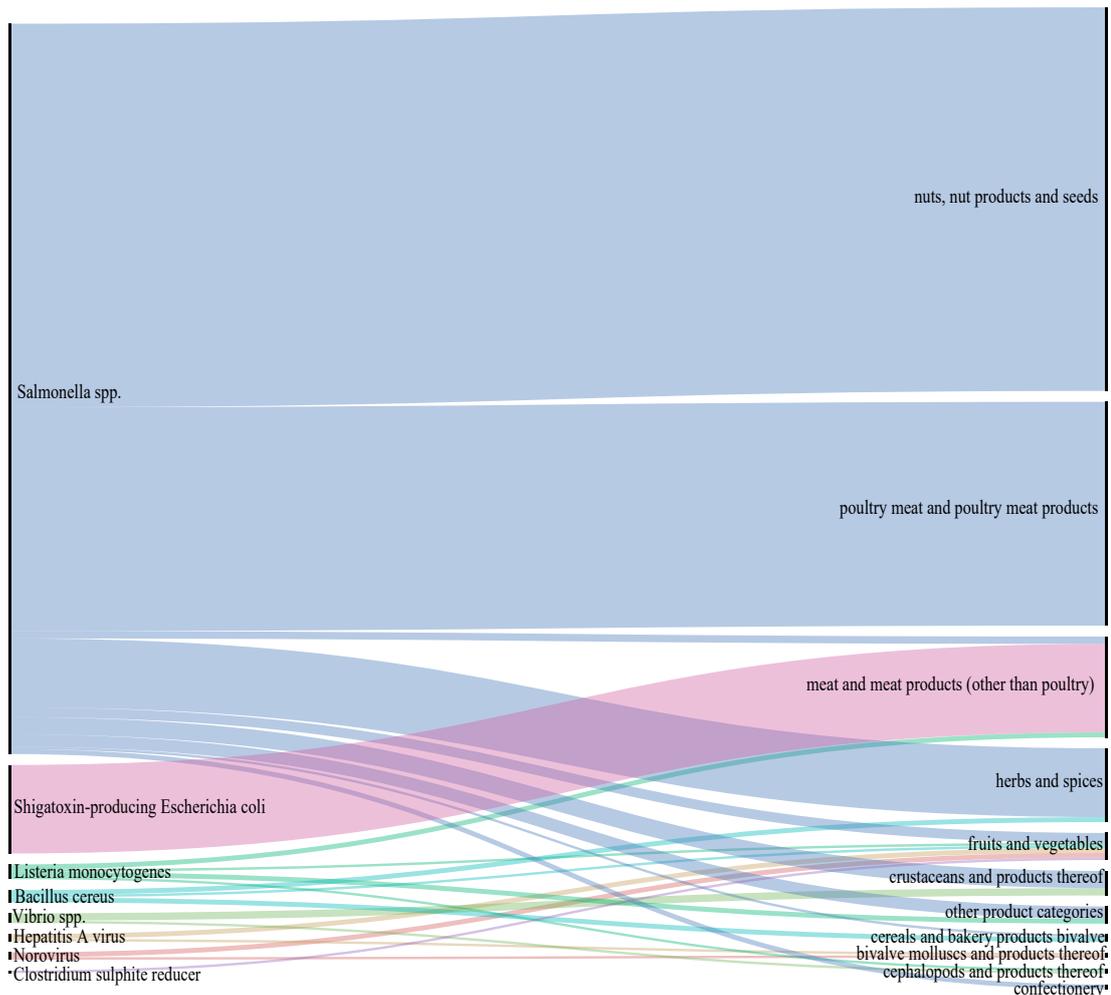
Ochratoxin A

With 33 notifications, the number for ochratoxin A in raisins from Turkey went up dramatically. Other notifications concerned mainly dried figs from Turkey as well.

Pathogenic micro-organisms

370 notifications (down by 35%)

Most issues reported on pathogens in food from non-member countries are still about findings of *Salmonella*. The trend shifted however away from poultry meat towards sesame seeds while the overall number of notifications went down.



Recurrent notifications:

- 67 notifications on *Salmonella* in sesame seeds from Sudan (all of which are border rejections)
- 63 notifications on *Salmonella* in poultry meat from Brazil (61 of which are border rejections)
- 40 notifications on *Salmonella* in sesame seeds from Nigeria (39 of which are border rejections)
- 23 notifications on *Salmonella* in sesame seeds from India (21 of which are border rejections)
- 16 notifications on *Salmonella* in poultry meat from Thailand (15 of which are border rejections)
- 15 notifications on shigatoxin-producing *Escherichia coli* in beef from Uruguay (13 of which are border rejections)
- 11 notifications on *Salmonella* in poultry meat from Chile (9 of which are border rejections)
- 11 notifications on shigatoxin-producing *Escherichia coli* in beef from Argentina (6 of which are border rejections)

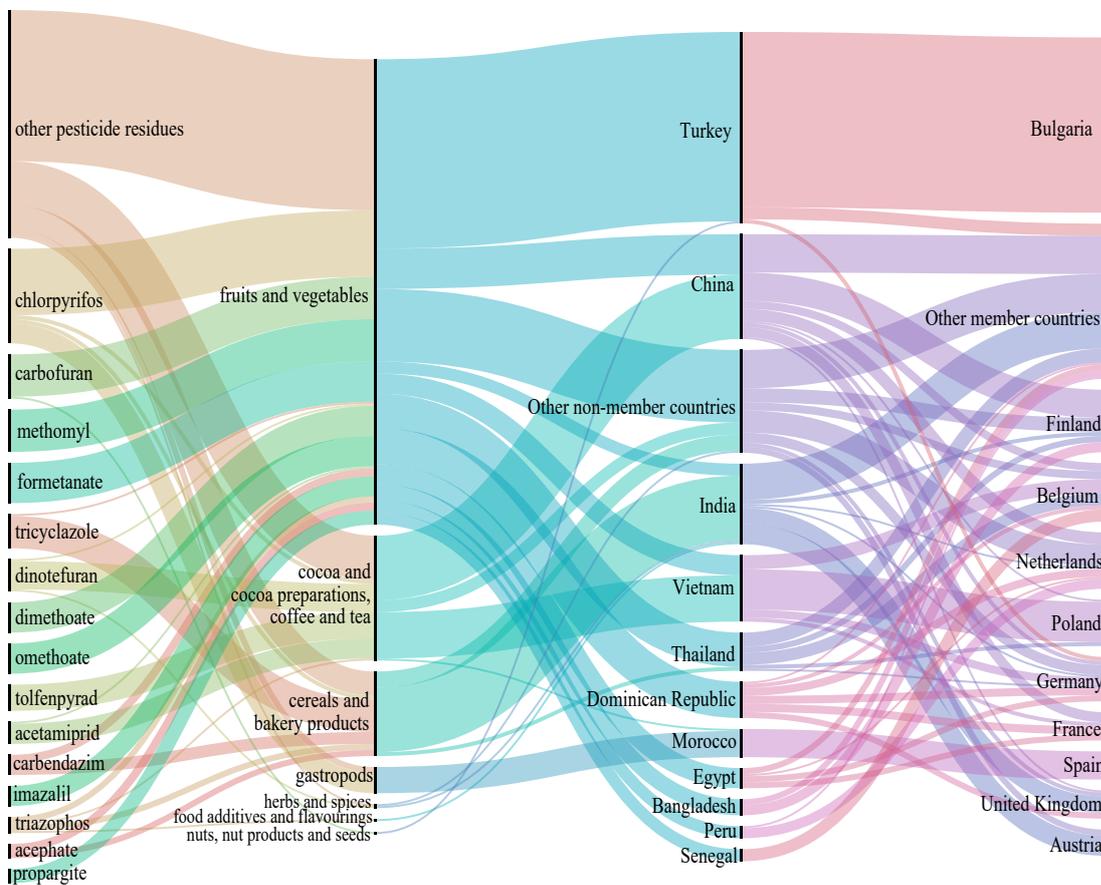
Pesticide residues

237 notifications (up by 27%)

Obviously most notifications report on the group of fruits and vegetables, in which most non-compliances on pesticides are traditionally found. All notifications in the “cocoa and cocoa preparations, coffee and tea”

category concern tea, mostly from China (15 notifications), as can be deduced from the diagram below. There is also a clear “stream” pointing to Vietnam (5 notifications) but this is because the number of substances found are counted instead of the notifications and in the tea from Vietnam every time three or more substances were found above MRL.

Food product categories for pesticide residues notifications in 2018, set out against non-member country of origin set out against notifying country



As many as 154 out of the 237 notifications are rejections at the EEA border. These products therefore never entered the EU. This is certainly in part due to the list of commodities held under Commission Regulation (EC) No 669/2009, which is reviewed twice yearly, requiring intensified checks at the border.

- rice from India, mostly basmati rice: 13 notifications (6 of which are border rejections)
- dried goji berries from China: 10 notifications (of which one border rejection)

Recurrent notifications

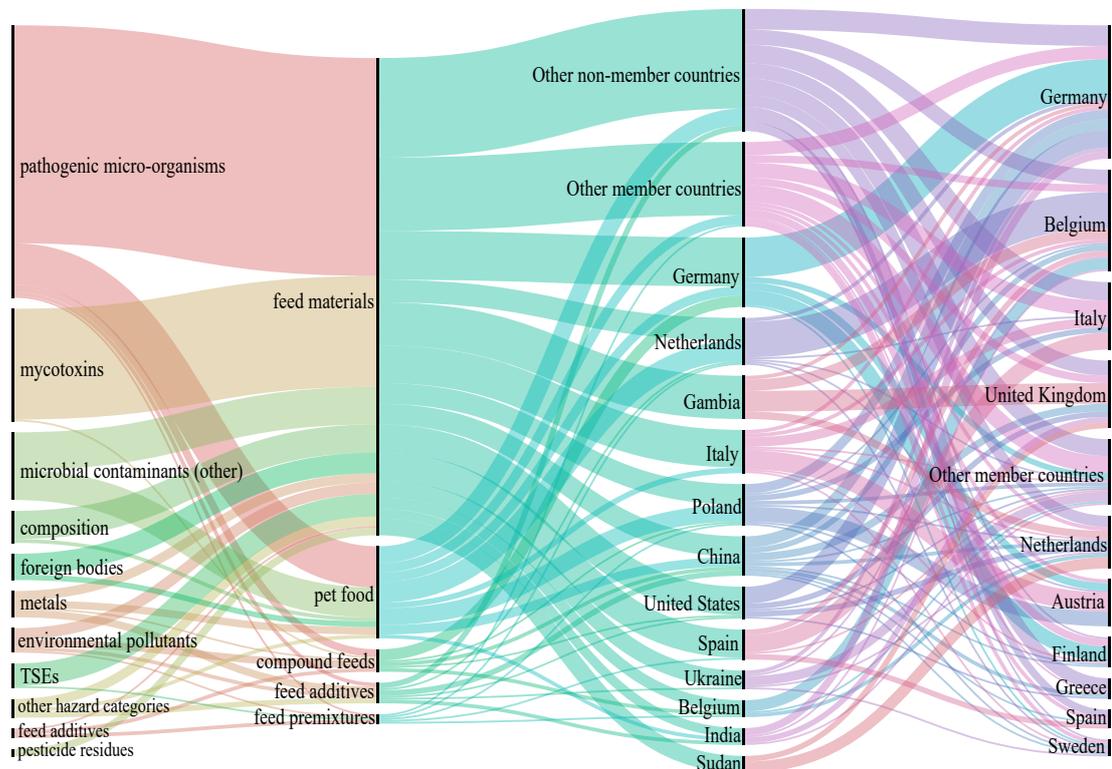
- sweet peppers from Turkey: 57 notifications (all of which are border rejections), all notified by Bulgaria
- lemons from Turkey: 12 notifications (all of which are border rejections)
- tea from China: 15 notifications (13 of which are border rejections)

2018 feed notifications

313 notifications

The notifications regarding feed take about 9% of the total volume of RASFF notifications, which is considerably more than in previous years. Their number has increased by 74 compared to 2017, their relative share has increased by roughly three percent.

Hazard categories for feed notifications in 2018 set out against feed product categories, set out against country of origin set out against notifying country



The chart above demonstrates that the notifications relate to feed from diverse origins, both from member countries and from non-member countries. An

important part of the notifications report on pathogenic micro-organisms but let's have a closer look at the different issues reported.

Pathogenic microorganisms

All of the 144 notifications concern *Salmonella* in different types of feed materials but also in pet food (22 notifications). In dog chews this is considered a serious health risk, not so much for the dog itself but for a child that may be contaminated from a dog chew lying around the house.

Mycotoxins

Of the 60 notifications on mycotoxins all but three concern aflatoxins, reported mostly in groundnuts of various origin. There were also some rarer mycotoxins such as T-2 toxin and HT-2 toxin detected in corn from Russia and lolitrem B in hay from France. Lolitrem B is one of many toxins produced by a fungus called *Epichloë festucae* (var. *lolii*), which grows in perennial ryegrass. The fungus is symbiotic with the ryegrass and does not harm the plant but the toxins it produces kill insects that feed on ryegrass. Lolitrem B is one of these toxins, but it is also harmful to mammals.

Microbial contaminants

This is a brand new hazard category that arose from the ashes of the “non-pathogenic micro-organisms”. Most notifications concern non-compliances with the microbiological feed hygiene criterion for feed materials: in accordance with Commission Regulation (EC) No 142/2011, Enterobacteriaceae count cannot exceed 300 colony forming units (cfu)/g in

five batch samples of feed material derived from animal by-products.

Composition

Most compositional issues concerned too high content of ragweed seeds (10 notifications). As explained in earlier annual reports, this is considered a serious risk as the environmental spread of ragweed can be detrimental to persons allergic to its pollen. Another issue was the too high content of zinc (3 notifications).

2018 food contact materials notifications

139 notifications

Notifications on food contact materials break with the declining trend in 2018 as their number rose by 17%. Their relative share in the overall notifications in 2018 is still a modest 3.8%.

Migration

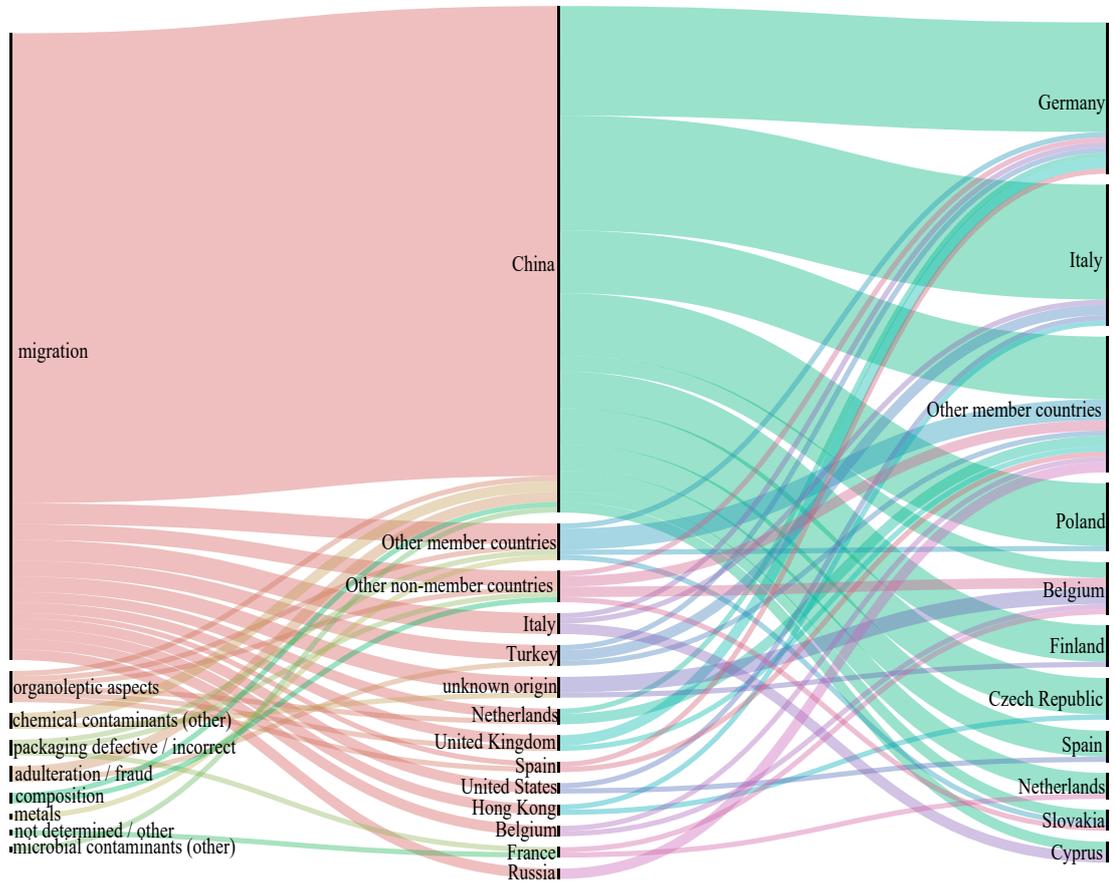
Most issues relating to food contact materials are about migration of chemicals from food contact materials into food. This is usually measured by bringing the material in contact with a “simulation solution” and analysing the chemicals that have migrated into the solution. Depending on the type of material, different chemicals will migrate. The table below gives an overview of the main materials and migrants notified to RASFF in 2018:

food contact material	compounds migrating	notifications in 2018
Melamine	formaldehyde, melamine	38
Nylon	primary aromatic hydrocarbons	25
Metal	chromium, nickel, manganese, iron, lead, cadmium, cobalt, lithium, aluminium, arsenic	24
ceramics, decorated glass	lead, cadmium, cobalt	10
Silicone	volatile organic compounds	5
lids of jars, plastic objects	plasticizers	5

Of the notifications concerning the migration of melamine and formaldehyde there were some (at least 15) that described the objects as made from “bamboo fiber”. In some of these notifications, there was often no mention of the melamine material

used and sometimes it was described as “filler”. Often these products had also false claims such as “eco-friendly” or “compostable”. Preliminary results of the analysis of such products show that they are prone to higher migration of chemicals into the food.

Hazard categories for food contact material notifications in 2018 set out against country of origin, set out against notifying country



More facts and figures

Evolution of the number of notifications

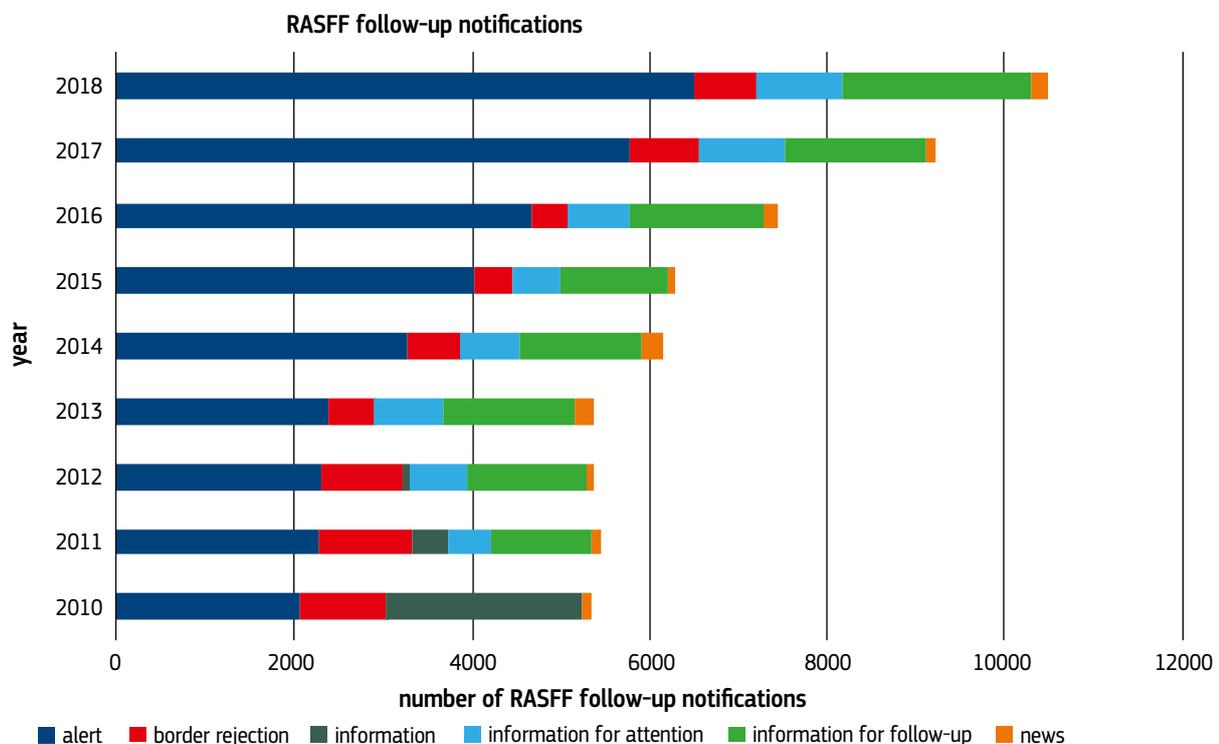
- by notification classification

Original notifications and follow-up

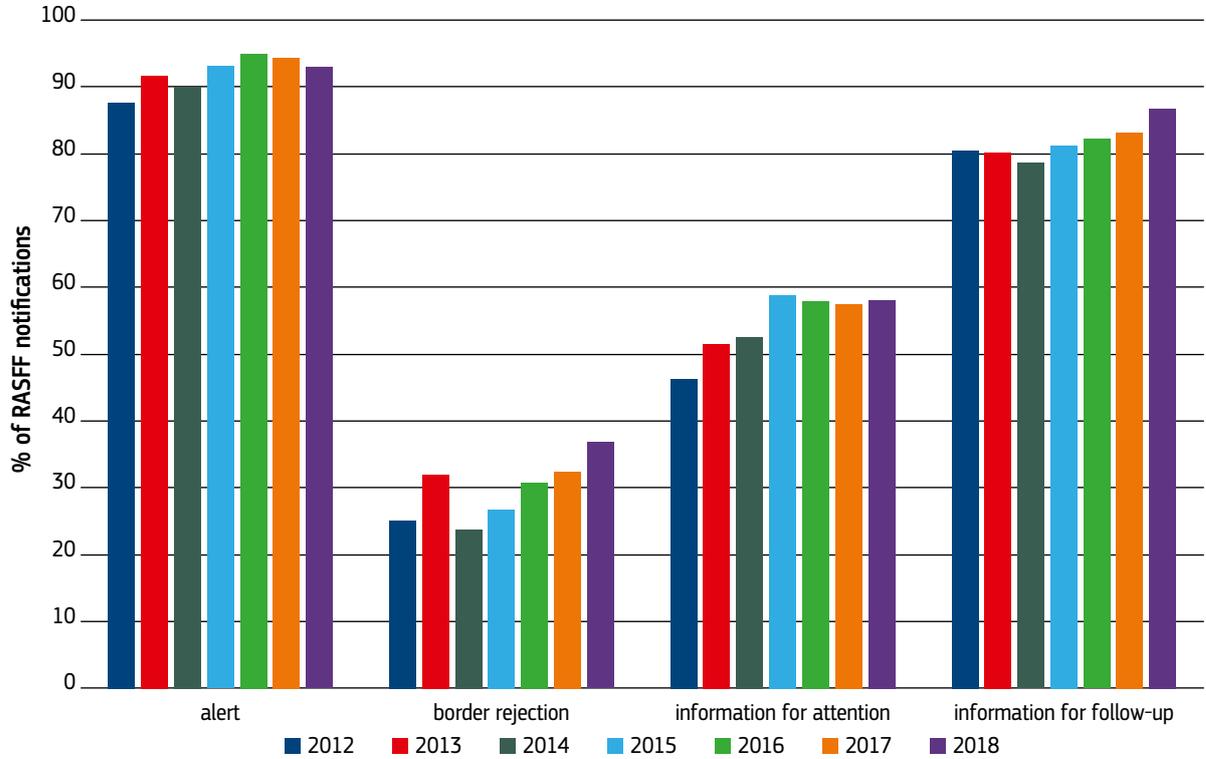
year	alert		border rejection		information for attention		information for follow-up	
	original	follow-up	original	follow-up	original	follow-up	original	follow-up
2012	522	2312	1712	906	679	664	507	1325
2013	584	2376	1438	525	679	763	429	1493
2014	725	3280	1357	581	605	670	402	1377
2015	748	4028	1376	417	475	538	378	1222
2016	817	4659	1159	421	573	704	372	1504
2017	927	5781	1570	771	683	979	586	1586
2018	1118	6513	1401	692	675	957	493	2141

The table above shows that the growth trend in RASFF is particularly pronounced for alert notifications and for follow-up notifications in general. The chart below demonstrates this clearly and shows

how this increase in follow-ups is fuelled by follow-ups to alert notifications. In addition, 2018 showed a significant boost in follow-ups to information notifications for follow-up.



Original notifications with follow-up



The chart shows the percentage of notifications, per notification type, that have been followed up on (i.e. that have received at least one follow-up). It demonstrates that, although the number of

follow-ups as a whole significantly rose in 2018, there are still some notifications that were not followed up. In the “alert” category the objective is to reach 100%.

by notifying member

Original notifications

Evolution of original notifications by notifying member⁽⁸⁾

member	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Austria	110	88	65	49	46	46	56	46	48	72
Belgium	117	94	128	143	164	198	179	129	199	240
Bulgaria	26	33	116	75	54	87	99	92	109	100
Commission Services	22	12	4	1	1			1	2	1
Croatia					8	11	20	28	49	24
Cyprus	53	52	76	46	44	55	39	29	41	21
Czech Republic	68	90	96	71	70	70	56	79	79	47
Denmark	122	131	151	130	112	99	94	80	130	134
Estonia	13	18	9	17	32	12	17	15	28	14
EFSA										
Finland	141	130	111	105	88	98	55	57	65	83
France	157	171	199	275	249	266	235	194	254	268
Germany	412	396	416	362	331	330	275	369	384	419
Greece	160	157	128	65	65	60	64	57	88	135
Hungary	10	20	13	10	3	15	9	20	29	28
Iceland	1	2	6	3	1	1	4	1	1	2
Ireland	30	33	49	53	40	42	57	31	68	29
Italy	466	541	544	515	528	503	506	412	543	398
Latvia	14	21	17	26	27	20	42	28	32	23
Liechtenstein										
Lithuania	33	48	39	51	28	36	30	42	37	41
Luxembourg	16	23	25	8	17	12	13	13	7	11
Malta	18	12	27	11	12	8	13	15	38	19
Netherlands	212	214	202	173	264	252	258	287	490	456
Norway	30	23	51	61	45	44	31	65	36	34
Poland	141	140	225	180	120	132	90	74	87	131
Portugal	8	18	22	28	40	38	30	33	29	50
Romania	18	25	21	14	14	17	23	16	19	9
Slovakia	52	56	35	35	35	38	34	40	50	32
Slovenia	73	56	45	43	34	30	39	32	31	26
Spain	255	285	300	239	200	189	174	146	237	250
Sweden	60	73	72	95	91	67	74	94	106	117
Switzerland	4	7	6	20	40	34	24	47	60	54
United Kingdom	334	319	509	516	327	279	337	349	373	353

⁽⁸⁾ Not including news notifications

*Follow-up notifications**Evolution of follow-up notifications by notifying member*

member	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	%
Austria	197	71	118	79	80	117	188	202	217	309	42
Belgium	178	117	158	210	240	297	262	290	459	588	28
Bulgaria	44	57	56	60	106	147	143	187	166	143	-14
Commission Services	196	307	346	340	421	424	427	352	412	352	-15
Croatia	1	3		2	15	31	31	66	98	100	2
Cyprus	57	68	47	76	73	62	78	85	69	118	71
Czech Republic	194	185	199	163	210	232	190	230	221	243	10
Denmark	118	95	160	131	179	207	198	180	247	366	48
Estonia	4	17	24	23	46	60	65	75	94	113	20
European Food Safety Authority						2				25	
Finland	25	23	19	23	64	97	94	98	92	130	41
France	256	556	361	283	242	325	359	453	552	702	27
Germany	489	452	519	409	376	512	483	597	705	817	16
Greece	132	113	118	98	66	74	91	87	109	151	39
Hungary	95	85	103	120	91	143	90	207	154	240	56
Iceland	1	1	5			4	6	12	15	28	87
Ireland	27	43	60	72	154	130	115	143	183	128	-30
Italy	413	520	654	486	439	433	587	693	940	732	-22
Latvia	30	32	40	36	43	68	58	64	72	95	32
Liechtenstein					3		1				
Lithuania	26	51	55	72	69	70	59	89	95	97	2
Luxembourg	11	15	16	8	30	37	37	48	82	111	35
Malta	44	43	24	32	43	42	77	96	109	142	30
Netherlands	149	155	135	180	222	265	364	497	824	693	-16
Norway	41	44	49	58	44	58	67	98	79	106	34
Poland	154	154	202	313	415	420	343	412	385	522	36
Portugal	28	42	25	74	85	109	138	96	130	141	8
Romania	40	48	63	85	76	137	127	123	125	167	34
Slovakia	44	68	69	76	59	70	74	86	76	88	16
Slovenia	93	42	47	86	44	68	76	100	116	122	5
Spain	999	1288	1077	1058	706	719	648	733	943	960	2
Sweden	60	83	84	95	161	155	201	211	214	403	88
Switzerland	51	70	62	87	85	105	138	176	188	262	39
United Kingdom	168	125	152	182	141	109	219	382	455	601	32

2018 notifications by hazard category and by classification

Perhaps a word of explanation is in order for the new hazard categories introduced this year⁽⁹⁾:

- **biological contaminants:** contaminants that originated in food due to a process of a biological (including enzymatic) nature e.g. histamine, natural presence of cyanide etc.
- **environmental pollutants:** contaminants that (possibly) derive from an environmental pollution e.g. PAH, dioxins, PCBs
- **metals:** used to be heavy metals but includes now also the “not so heavy” ones
- **microbial contaminants:** used to be “non-pathogenic micro-organisms” such as *Escherichia coli* or Enterobacteriaceae
- **natural toxins:** such as pyrrolizidine alkaloids, tropane alkaloids, marine biotoxins, rye ergot, etc.
- **process contaminants:** contaminants that are created in food (or feed) processes, such as acrylamide, glycidyl esters, ethyl carbamate

hazard category	alert	border rejection	information for attention	information for follow-up
adulteration / fraud	1	70	7	8
allergens	158	11	35	3
biological contaminants (other)	22	4	20	
chemical contaminants (other)		2	1	
composition	96	15	77	36
environmental pollutants	28	5	14	7
feed additives				5
food additives and flavourings	19	64	24	35
foreign bodies	106	10	19	33
genetically modified food or feed		9	1	3
industrial contaminants				1
labelling absent/incomplete/incorrect	17	5	10	19
metals	56	13	55	9
microbial contaminants (other)	27	27	29	51
migration	47	46	14	17
mycotoxins	88	508	55	4
natural toxins (other)	22		7	3
not determined / other	6	3	1	1
novel food	8	6	15	22
organoleptic aspects	1	11	1	20
packaging defective / incorrect	6	8	4	13
parasitic infestation		1	17	23
pathogenic micro-organisms	349	302	191	137
pesticide residues	48	154	60	14
poor or insufficient controls	3	104	10	19
process contaminants	5	2	1	5
radiation		7	4	3
residues of veterinary medicinal products	10	15	15	8
TSEs		3	3	8

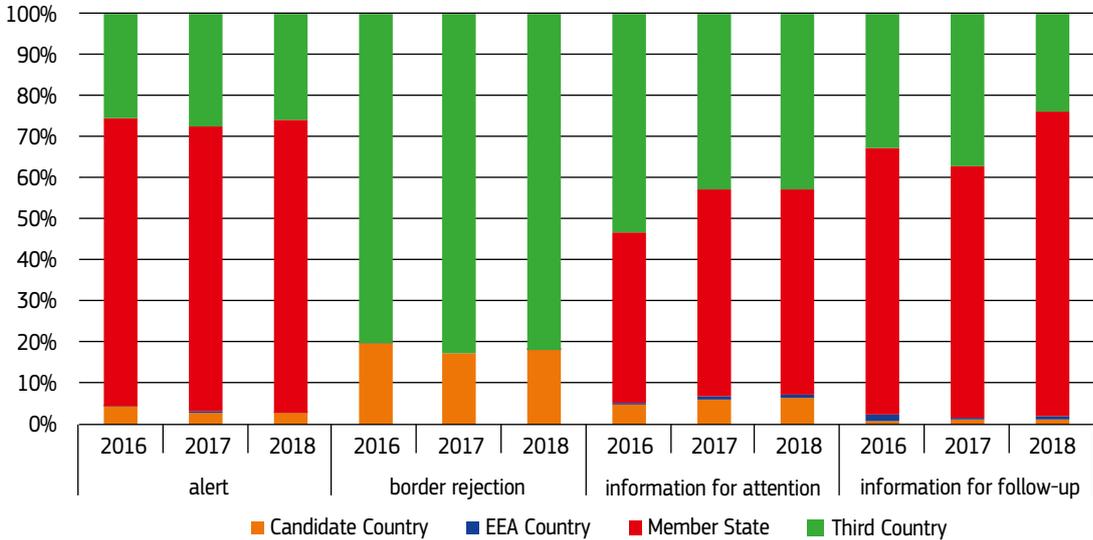
⁽⁹⁾ the notifications through the RASFF Window and RASFF Portal search tools are not always correctly filtered according to these new categories

2018 notifications by product category and by classification

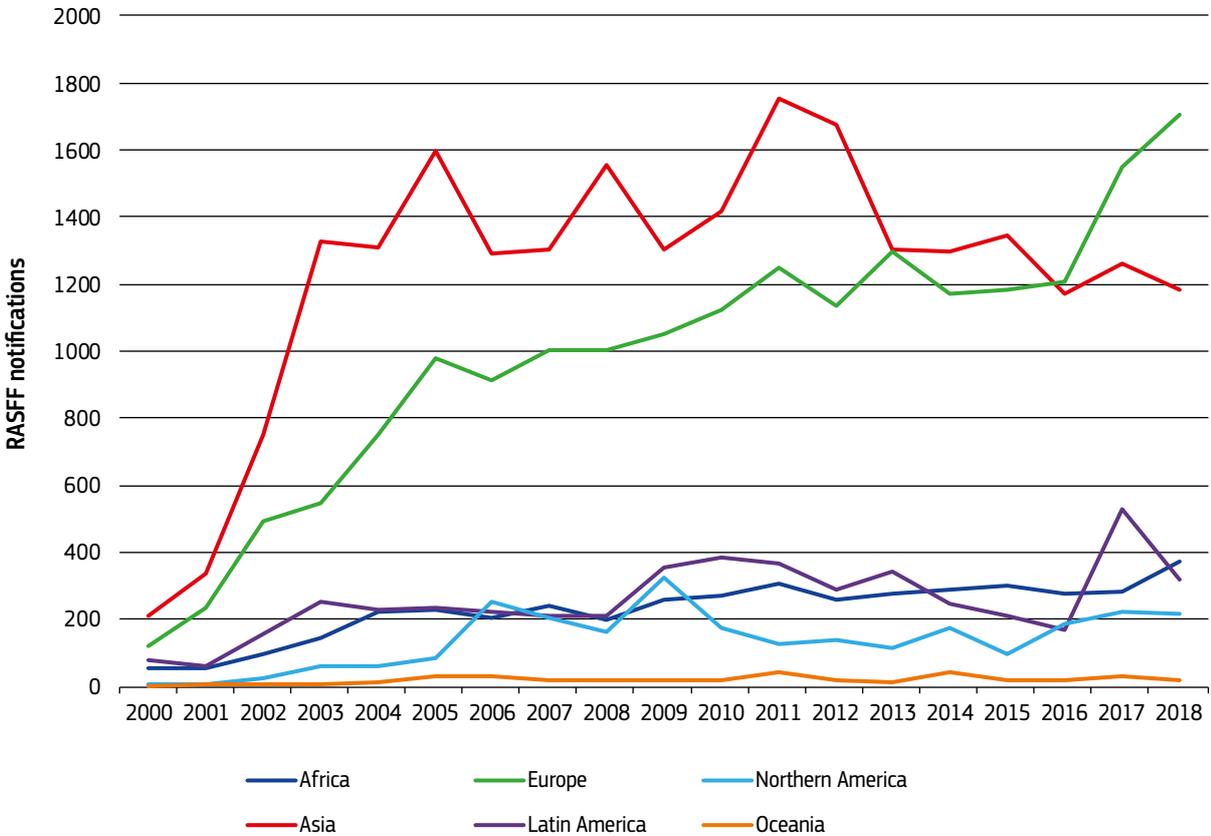
product category	alert	border rejection	information for attention	information for follow-up
alcoholic beverages	2		1	
bivalve molluscs and products thereof	54	5	45	3
cephalopods and products thereof	2	17	12	1
cereals and bakery products	76	26	24	29
cocoa and cocoa preparations, coffee and tea	14	27	9	9
compound feeds	2		4	6
confectionery	26	12	14	16
crustaceans and products thereof	6	32	18	5
dietetic foods, food supplements, fortified foods	116	13	75	51
eggs and egg products	10		8	5
fats and oils	11	9	5	
feed additives	2	1	2	5
feed materials	24	87	22	107
feed premixtures			1	4
fish and fish products	85	107	91	47
food additives and flavourings	6	3		4
food contact materials	48	52	16	22
fruits and vegetables	122	237	98	18
gastropods		4	6	3
herbs and spices	46	46	26	4
honey and royal jelly	2	3	1	
ices and desserts	10	2	2	6
meat and meat products (other than poultry)	86	30	44	40
milk and milk products	49		13	14
natural mineral water			1	4
non-alcoholic beverages	7	12	2	7
nuts, nut products and seeds	80	553	28	6
other food product / mixed	25	8	8	10
pet food	18	8	4	13
poultry meat and poultry meat products	100	86	62	17
prepared dishes and snacks	47		16	14
soups, broths, sauces and condiments	16	7	4	14
wine			1	

Notifications – country of origin

2016-2018 notifications by country type (origin)



2000-2018 notifications by world region



Annex: in case you want more data

2015-2018 notifications by country of origin

country	2015	2016	2017	2018
Afghanistan	6	2		4
Albania	4		4	7
Algeria	3		11	
Andorra		1		
Argentina	23	35	56	92
Australia	10	5	10	8
Austria	21	18	13	25
Azerbaijan	1	6	18	18
Bangladesh	6	9	9	13
Belarus	25		1	6
Belgium	60	55	92	128
Belize	2		1	
Benin	1	4	2	2
Bolivia	5	6	13	15
Bosnia and Herzegovina	3	4	9	2
Brazil	92	56	373	108
Brunei			1	
Bulgaria	8	12	11	10
Burkina Faso		1	2	4
Cambodia	6	3	3	
Cameroon	2	2	1	1
Canada	7	7	20	11
Cape Verde	2	3	4	
Chile	14	11	15	32
China	399	256	305	315
Colombia	4	5	4	2
Costa Rica		2	2	
Côte d'Ivoire	1	1	3	
Croatia	10	7	5	7
Curaçao	1			
Cyprus	1	1	1	2
Czech Republic	23	30	24	24
Denmark	28	35	29	33
Dominican Republic	18	6	7	16
Ecuador	13	9	17	8
Egypt	78	59	60	56

country	2015	2016	2017	2018
El Salvador		2	1	
Estonia	6	2	4	11
Ethiopia	7	12	16	11
Faeroe Islands		1		1
Fiji		1	1	
Finland	1	2	2	7
France	122	119	133	215
French Polynesia	1			
Gambia	9	1	1	24
Georgia	5	15	8	10
Germany	120	117	143	153
Ghana	19	23	13	11
Greece	12	8	10	15
Greenland				1
Guatemala				1
Guinea	1	2	1	2
Honduras	2			
Hong Kong	13	12	5	3
Hungary	25	24	26	43
Iceland	1	4		3
India	277	202	225	161
Indonesia	21	38	23	25
Iran	61	68	73	39
Ireland	17	16	22	25
Israel	2	8	5	5
Italy	118	108	190	156
Jamaica	1			
Japan	3	7	2	11
Jordan	3	1	1	4
Kazakhstan	2		1	2
Kenya	18	3		2
Kosovo			1	1
Kuwait	2			
Laos	11	29	4	1
Latvia	16	5	9	10
Lebanon	4	5	18	10

country	2015	2016	2017	2018
Lithuania	12	24	13	13
Luxembourg	2	2	3	1
Madagascar	8	9	3	2
Malawi			1	
Malaysia	7	6	5	9
Maldives	1		1	3
Mali		1	1	3
Malta		1	7	2
Mauritania	15	8	3	10
Mauritius	4	2	2	8
Mexico	21	5	5	6
Moldova	1	3		2
Mongolia				1
Montenegro		1		
Morocco	28	34	26	31
Mozambique	2	6		4
Myanmar		1	1	5
Namibia	6	8	8	9
Nepal	1	1		
Netherlands	97	113	148	166
New Zealand	5	8	13	8
Nicaragua	3	4	2	5
Niger		1		
Nigeria	42	25	47	49
Norway	8	5	11	11
Oman				1
Pakistan	17	12	11	24
Panama	1	7	2	4
Papua New Guinea	1	2	7	3
Paraguay	1	1		
Peru	13	12	9	14
Philippines	12	9	14	15
Poland	126	136	161	186
Portugal	23	20	31	23
Republic of North Macedonia	1	3	1	2
Réunion	1			
Romania	20	14	13	20
Russia	12	17	27	22
Saudi Arabia	1	2	1	2

country	2015	2016	2017	2018
Senegal	10	14	12	16
Serbia	16	15	23	4
Seychelles	1	5	4	8
Sierra Leone				1
Singapore	1			2
Slovakia	9	5	8	16
Slovenia	2	3	7	9
Solomon Islands			1	
South Africa	22	23	9	13
South Korea	16	9	10	12
Spain	159	176	227	183
Sri Lanka	17	15	17	29
Sudan	1		20	79
Suriname	1	1	1	2
Swaziland			1	
Sweden	25	18	19	27
Switzerland	3	6	8	12
Syria	1	4	9	16
Taiwan	10	8	3	5
Tanzania		1	1	1
Thailand	70	86	83	55
Togo	1		2	2
Trinidad and Tobago				1
Tunisia	21	18	24	8
Turkey	281	275	318	318
Uganda		10	5	10
Ukraine	21	20	12	19
United Arab Emirates	3		2	1
United Kingdom	56	67	109	105
United States	89	179	203	202
unknown origin	8	9	49	26
Uruguay		4	12	17
Uzbekistan	6	21	6	5
Venezuela	1	1	9	1
Vietnam	87	68	80	61
Yemen	1		1	
Zambia				3
Zimbabwe		2	1	1

2018 notifications by hazard category and notifying country

hazard category	AT	BE	BG	CH	CY	CZ	DE	DK	EE	ES	FI	FR	GB	GR	HR	HU	IE	IS	IT	LT	LU	LV	MT	NL	NO	PL	PT	RO	SE	SI	SK		
adulteration / fraud	3	1	1	1	1	2	1	7	8	23	3	1	11	11	3	11	1																
allergens	2	14	2	3	19	17	15	6	7	31	1	2	25	4	5	30	19	1	4														
biological contaminants (other)	1	4	1	1	4	2	10	5	10	7																							
chemical contaminants (other)											3																						
composition	8	7	11	6	36	5	6	9	7	51	2	8	5	2	3	3	10	3	2	36	2	2											
environmental pollutants	5			2	12	1	5	2	1	2	2	2	2	4	2																		
feed additives				1	1																	1	1										
food additives and flavourings	2	3	2	3	8	5	17	2	12	28	10	1	20	5	1	2	2	1	4	1	8	3											
foreign bodies	8	10	2	1	31	22	1	4	8	16	12	1	3	1	18	2	16	1	3	6	3												
genetically modified food or feed	1			1							3	2	1	3	1																		
industrial contaminants											1																						
labelling absent/incomplete/incorrect	6	1	1	1	8	1	2	8	1	1	12	2	6	3																			
metals	5	10	1	7	1	10	1	19	15	2	2	1	40	7	1	2	3	1	1	2													
microbial contaminants (other)	10	10	1	1	3	2	9	12	7	15	9	5	1	1	1	25	1	14	1	3	1	2	1										
migration	1	10	3	4	8	31	1	5	4	2	3	1	26	2	3	4	12	3	2														
mycotoxins	4	38	16	16	4	6	96	6	61	4	36	68	18	4	2	4	1	47	4	2	1	158	1	25	17	1	6	4	5				
natural toxins (other)	4			1	8	1	2	4	1	2	3	2	2	2	2																		
not determined / other	1			1			1	1	4	3																							
novel food	3	1	1	1	4	1	1	2	1	2	3	2	1	2	1	1	1	1	1	1	1	22	2										
organoleptic aspects	1			3	6	1	2	2	6	3	2	1	2	1	4																		
packaging defective / incorrect	2	1		2	1	1	7	1	3	1	7	1	3	1	1	7	3	1	1	7	3	1											
parasitic infestation											35	1																					
pathogenic micro-organisms	28	74	2	2	5	4	128	33	5	35	29	101	54	85	7	9	1	104	17	2	3	4	151	5	53	3	4	21	1	4			
pesticide residues	6	25	77	5	6	21	8	3	13	18	12	10	7	4	8	2	22	5	10	2	2	4	5	1									
poor or insufficient controls	4			3	6	56	1	3	36	1	2	6	1	5	2	2	10																
process contaminants	3			1							1	2	4	1																			
radiation	1			3			2				1	6	1																				
residues of veterinary medicinal products	11	3	2	5	1	6	2	2	1	1	4	1	1	1	3	3	1																
TSEs	2			1			2	1	5	1	1																						

The coloured cells indicate the country with the highest number of notifications for a given hazard category.

2018 notifications by product category and notifying country

product category	AT	BE	BG	CH	CY	CZ	DE	DK	EE	ES	FI	FR	GB	GR	HR	HU	IE	IS	IT	LT	LU	LV	MT	NL	NO	PL	PT	RO	SE	SI	SK		
alcoholic beverages	2																														1		
bivalve molluscs and products thereof	1	1			1	1	7	2	17	2	1	1	3	53									1	6	3	3					4		
cephalopods and products thereof	1		1		1	1	11	2	3	1				5											1					5			
cereals and bakery products	9	9	6	2	20	15	7	5	5	15	6	2	2	1	14						1	2	10	4	7	2				4	4	3	
cocoa and cocoa preparations, coffee and tea	1	1		1	11	1	4	10	5	3	1	1									1		1	4	2	7				2	3		
compound feeds	1			6							1											1			2					1			
confectionery	2	1		2	2	10	3	1	4	2	3	12	1	1	8	3						2	3	1	1					5			
crustaceans and products thereof	8			2	3	1	14	6	5	1					9	1								8	2					1			
dietetic foods, food supplements, fortified foods	7	5	4	1	1	3	25	7	1	8	4	14	64	2	10	4					2	5	3	6	15	1	7			47	5	5	
eggs and egg products	2			1	5	1	1				1	2			2	1								2	3					2			
fats and oils	3	1		1	2						4	1											2	1	8	1				1			
feed additives	4			1						1	1														2								
feed materials	14	31	1	1	1	51	2	9	16	3	32	8	2	2	2	1	27						4	1	21				2	2	7		
feed premixtures	2			1																											1		
fish and fish products	2	15	1	13	1	3	2	14	8	52	2	33	35	3	1	101	2	1				15	4	4	17				1	1			
food additives and flavourings							1				1	3												2						1			
food contact materials	2	10	3	4	8	29	2	2	6	8	2	3	1	1	27	1	2	3				5	13						3	4			
fruits and vegetables	8	36	82	8	14	51	23	3	20	12	37	29	13	7	1	1	28	3	1	1	1	39	2	20	8	3	12	6	7				
gastropods									12																								
herbs and spices	5	5		3	20	4	22	8	6	11	4	1	4		2	1					1	2	10	4	4	1			2		3		
honey and royal jelly				1			1	2		1																							
ices and desserts	1	1		2	3		1	1	2															2						1			
meat and meat products (other than poultry)	7	28	1	1	14	13	2	9	2	18	11	1	2	2	3	24					1	1	38	1	6	1	2	9		4			
milk and milk products	2	4	1	8	4	1	2	25	5	1	1	7											9	3		1	1						
natural mineral water											2																						
non-alcoholic beverages	1	1		1			1	1	1	5		1			5	2						2	2	3	1				1				
nuts, nut products and seeds	7	20	14	4	1	9	3	93	5	53	3	27	57	91	2	1	40	6	1	1	171	1	37	9	2	5	3	3					
other food product / mixed	3	1		11	3		4	1	6	5					4							2	8	1		1	3	1					
pet food	8	8		1	11		1	3	2						3							1	2	1		2							
poultry meat and poultry meat products	1	26	1	1	2	20	22	1	1	2	40	34	5	2	3	13	14	1	1		53	16			1	3	1	2					
prepared dishes and snacks	2	10	4	3	10	9	1	8	7	1					6							11	2							4			
soups, broths, sauces and condiments	1	2	1	3	1	3	1	2	2	4					8							1	9	1					2				
wine											1																						

The coloured cells indicate the country with the highest number of notifications for a given product category.

2018 notifications by product category and type of control

product category	border	market
alcoholic beverages		3
bivalve molluscs and products thereof	6	101
cephalopods and products thereof	21	11
cereals and bakery products	29	125
cocoa and cocoa preparations, coffee and tea	27	32
compound feeds		12
confectionery	15	53
crustaceans and products thereof	40	21
dietetic foods, food supplements, fortified foods	14	241
eggs and egg products		23
fats and oils	10	15
feed additives	2	8
feed materials	91	149
feed premixtures		5
fish and fish products	125	205
food additives and flavourings	2	11
food contact materials	44	94
fruits and vegetables	244	231
gastropods	9	4
herbs and spices	52	70
honey and royal jelly	4	2
ices and desserts	2	18
meat and meat products (other than poultry)	41	159
milk and milk products		76
natural mineral water		5
non-alcoholic beverages	13	15
nuts, nut products and seeds	532	135
other food product / mixed	9	42
pet food	15	28
poultry meat and poultry meat products	88	177
prepared dishes and snacks		77
soups, broths, sauces and condiments	6	35
wine		1

2018 non-member countries having provided follow-up

The first column “distr” shows the number of 2018 notifications for each country to which the Commission’s Services notified distribution of a product. The second column “orig” shows the number of 2018 notifications for each country to which the Commission’s Services notified a product originating

from it. The third column “other” gives the number of notifications for which the country was notified for another reason than origin or distribution e.g. if the product transited through the country. The fourth column “follow-ups” shows the number of follow-ups received from each country in 2018.

country	distr	orig	other	follow-ups
Afghanistan	2	4		2
Åland Islands	1			
Albania	11	7	1	17
Algeria	6		1	
Andorra	32		3	22
Angola	5			
Antigua and Barbuda	2			
Argentina	2	99		10
Armenia	2			
Aruba	3			
Australia	16	8	2	11
Austria	3		2	
Azerbaijan	3	18		
Bahamas	2			
Bahrain	10			1
Bangladesh		13		2
Belarus	7	6		
Belgium	1		1	
Belize	2		1	
Benin	2	2		
Bermuda	3			
Bolivia	1	16		
Bosnia and Herzegovina	9	2	1	13
Brazil	6	112	1	75
Brunei	3			
Bulgaria			7	
Burkina Faso	1	4		
Burundi	1			
Cameroon	5	1	1	
Canada	19	11	4	4
Cape Verde	4		1	1
Cayman Islands	3			
Central African Republic	1			
Chad	1			
Chile	9	32	2	12
China	12	319	7	
Colombia	4	2	1	2
Commission Services			3	
Congo (Brazzaville)	4		1	
Costa Rica	2		1	
Côte d'Ivoire	6			
Croatia	1			
Cuba	2			
Curaçao	3			
Democratic Republic of the Congo	7			

country	distr	orig	other	follow-ups
Djibouti	3			
Dominican Republic	1	16		3
East Timor	1			
Ecuador	2	8		11
Egypt	2	58		3
El Salvador	1			1
Equatorial Guinea	4			
Ethiopia		9		
Faeroe Islands	4	1		2
Falkland Islands	2			
France	1			
French Polynesia	3			3
Gabon	5			
Gambia	3	24		1
Georgia	6	10	7	27
Germany	1		1	
Ghana	8	11		
Gibraltar	10		1	8
Greece	1		1	
Greenland	4	1	2	
Guadeloupe	1			
Guatemala	2	1		
Guernsey	8			
Guinea	3	2		
Haiti	2			
Honduras	2			
Hong Kong	30	4	25	46
Iceland			1	
India	1	164	7	164
Indonesia		27	3	17
INFOSAN			726	
Iran	2	38		1
Iraq	3			
Isle of Man	2			
Israel	6	4	2	4
Italy	1			
Japan	14	11		5
Jersey	10			
Jordan	10	4	1	
Kazakhstan	3	2		
Kenya	5	2		
Kosovo	8	1		4
Kuwait	3			
Kyrgyzstan	3			
Laos		1		
Latvia			1	
Lebanon	10	10	2	15
Liberia	4			
Lithuania		1		
Madagascar		2		
Malaysia	7	9		1
Maldives	3	3		
Mali	6	3		1
Marshall Islands	2			

country	distr	orig	other	follow-ups
Mauritania	2	10		
Mauritius	12	8	1	1
Mexico	2	6	1	1
Moldova	12	2		
Monaco	13		5	
Mongolia		1		
Montenegro	5		1	2
Morocco	15	33		8
Mozambique		4		
Myanmar		5		
Namibia	1	9		
Nepal	1			
Netherlands			3	
New Caledonia	4			4
New Zealand	7	8		1
Nicaragua		5		
Niger	1			
Nigeria	3	49		7
Oman	3	1		
Pakistan	1	23		
Panama	4	4	2	
Papua New Guinea		3		
Paraguay			1	
Peru	6	14	1	5
Philippines	8	15		1
Poland	1		1	
Qatar	13			
Republic of North Macedonia	6	2	1	6
Russia	23	22	1	1
Rwanda	2			
Saint Helena	1			
Saint Martin	3			
Saint Pierre and Miquelon	1			
San Marino	30			27
Saudi Arabia	5	2		
Senegal	7	16		3
Serbia	15	4	1	6
Seychelles	4	8		
Sierra Leone	1	1		
Singapore	18	2	11	1
Sint Maarten	1		1	
South Africa	9	13	1	6
South Korea	8	12	6	
Spain	1			
Sri Lanka	2	29	1	14
Sudan	1	79		
Suriname	4	2		1
Syria		16		
Taiwan	8	5		2
Tanzania		1		
Thailand	15	57	3	8
Togo	1	2		
Trinidad and Tobago	1	1		
Tunisia	2	8		1

country	distr	orig	other	follow-ups
Turkey	12	318	21	6
Turkmenistan			1	
Uganda		9		
Ukraine	22	19	3	19
United Arab Emirates	23	1	9	
United Kingdom			3	
United States	34	199	27	58
Uruguay	5	17		3
Uzbekistan	1	5		
Vanuatu	1			
Venezuela		1		
Vietnam	9	61	2	9
Zambia	1	3		
Zimbabwe	1	1		

2018 notifications by hazard category and risk decision

Categories coloured red have predominantly notifications⁽¹⁰⁾ with risk decision “serious”, whereas categories coloured green have mostly notifications with a “not serious” risk decision. Categories

coloured blue have predominantly “undecided” risk and those coloured orange have predominantly “serious” and “undecided” risk as compared with “not serious”.

hazard category	undecided	serious	not serious
adulteration / fraud	10	6	101
allergens	3	147	8
biological contaminants (other)		42	1
chemical contaminants (other)	1		
composition	62	108	14
environmental pollutants	2	48	2
feed additives	1		3
food additives and flavourings	9	30	86
foreign bodies	14	78	42
genetically modified food or feed	14		1
industrial contaminants		2	
labelling absent/incomplete/incorrect	7	10	12
metals	5	144	15
microbial contaminants (other)	6	59	62
migration	35	48	34
mycotoxins	5	542	2
natural toxins (other)	1	24	1
not determined / other	2	5	
novel food	47	16	15
organoleptic aspects	4	3	34
packaging defective / incorrect	4	6	15
parasitic infestation	2		21
pathogenic micro-organisms	40	488	111
pesticide residues	66	180	5
poor or insufficient controls	10	6	81
process contaminants		1	2
radiation		1	4
residues of veterinary medicinal products	6	24	16
TSEs			8

⁽¹⁰⁾ Please note that what is counted here are really “hazards” and as a notification can contain multiple hazards, a non-serious hazard can become combined with a serious hazard in a notification, leading to a “serious” risk decision for the notification. This however leads to the non-serious hazard being counted as “serious” in the table.

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