European Commission

RASFF

The Rapid Alert System for Food and Feed

2017 Annual Report

Health and Food Safety

RASFF
Annual Report 2017

RASFF — The Rapid Alert System for Food and Feed — 2017 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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Preamble

Dear reader,

If you are familiar with the RASFF you may skip to the chapter on RASFF in 2017, 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
ASP	Amnesic Shellfish Poisoning
CA	Competent Authority
CED	Common Entry Document
CFU	Colony-forming units
C(V)ED	Common (Veterinary) Entry Document
EC	European Commission
ECCP	European Commission Contact Point (for RASFF)
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
ESTI	Estimated Short Term Intake
EU	European Union
EUROPHYT	European Union Notification System for Plant Health Interceptions
EWRS	Early Warning and Response System
FBO	Food Business Operator
FCM	Food Contact Material
FFN	Food Fraud Network
HAV	Hepatitis A Virus
IMSOC	Information Management System for Official Control
INFOSAN	International Food Safety Authorities Network
iRASFF	RASFF's online platform
IT	Information Technology
LOQ	Limit of Quantification
MLVA	Multiple-Locus Variable number tandem repeat Analysis
MRL	Maximum Residue Levels
NCP	National Contact Point (for RASFF)
OCR	Official Control Regulation
OJ	Official Journal
pH	logarithmic scale used to specify the acidity or basicity of an aqueous solution
RASFF	Rapid Alert System for Food and Feed
ROA	Rapid Outbreak Assessment
STEC	Shigatoxin-Producing Escherichia coli
SCP	Single Contact Point
TRACES	Trade Control and Expert System
TSEs	Transmissible Spongiform Encephalopathies
US FDA	United States (of America) Food and Drug Administration
UI	Urgent Inquiry
WI	Working Instruction
WGS	Whole Genome Sequencing

Contents

1 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, EFSA, EEA and at national level in member countries exchanging information in a clear and structured way by means of an online system called *iRASFF*.

The legal basis

The legal basis of the RASFF is Regulation (EC) N° 178/2002. 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 the European Food Safety Authority (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.

Regulation (EC) N° 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: http://ec.europa.eu/comm/food/food/rapidalert/members_en.htm

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.

Commission 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 European Union for reason of a risk to human health and also to animal health or to the environment if it concerns feed.

- **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.

RASFF news

A 'RASFF news' 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.

RASFF news items 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.

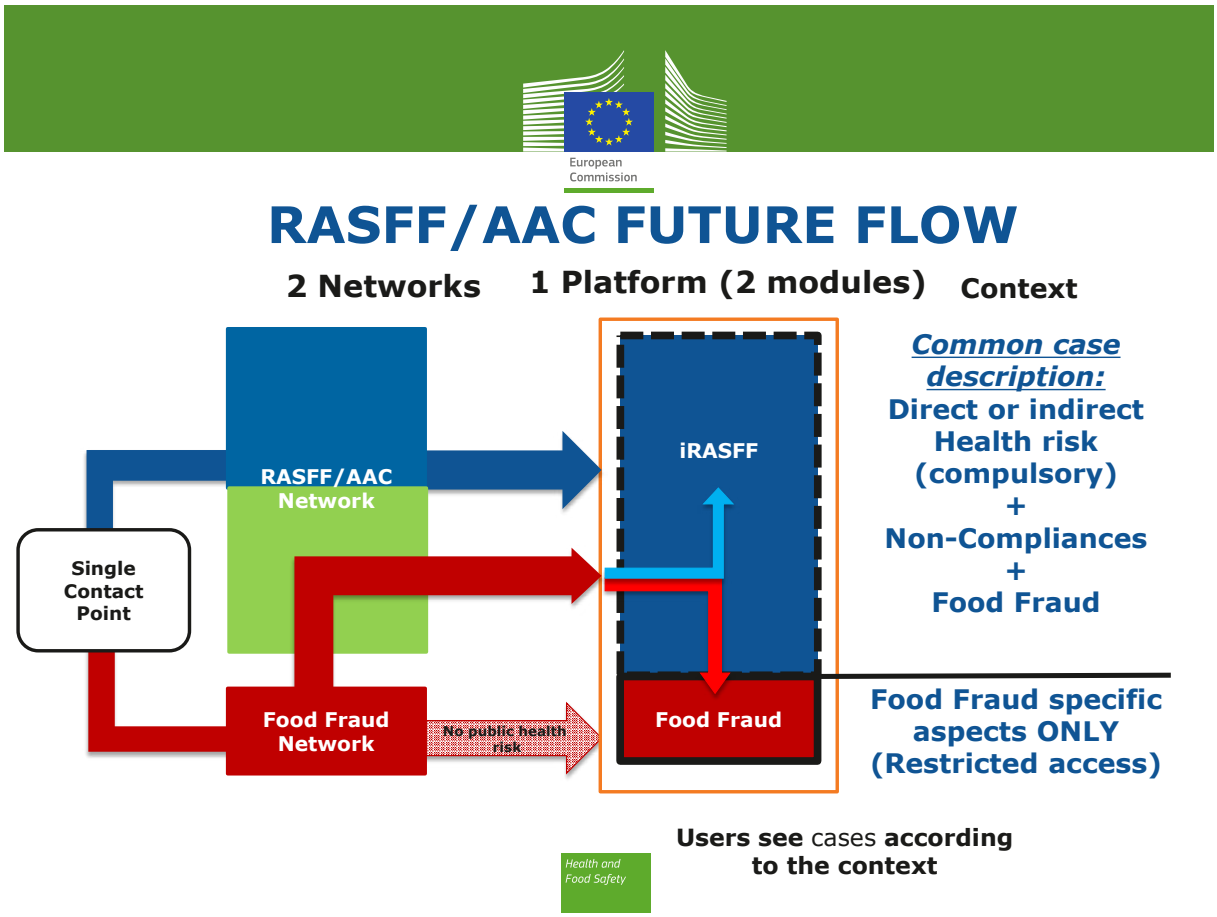
All information on the RASFF can be found on the website at: http://ec.europa.eu/food/food/rapidalert/index_en.htm

2 RASFF in 2017

End of April 2017, Regulation (EU) No 2017/625, better known as the "Official Control Regulation" or in short: OCR, entered into force. This major piece of legislation lays the groundwork for a new, integrated set of rules for official controls aimed at ensuring a high level of human, animal and plant health as well as animal welfare along the agri-food chain. The integration of the rules required an integrated collection of information management tools, which is why the Information Management System for Official Control (IMSOC) has been foreseen in the OCR (Article 131). Promptly, preparatory work was started to integrate current EU-managed IT systems such as the TRAde Control and Expert System (TRACES) and the IT systems supporting the EU's alert systems (RASFF/AAC and EUROPHYT) into IMSOC.

Experience gained from the fipronil incident in the summer of 2017 (see on page[] for more details on the incident) allowed the Commission and Member States to identify the need for a more integrated way of using the Administrative Assistance and Cooperation (AAC) network together with the RASFF. More information on the lessons learned from the fipronil incident is given in the food fraud annual report.

It was decided to expand iRASFF (the IT tool supporting the RASFF) for use of the AAC network, whilst food fraud specific information would remain in the food fraud dedicated IT platform in order to better control access to highly sensitive information. The use of the single IT tool for both networks will be coordinated by a single contact point (SCP) for the two networks per member country. The future information flow is presented in the diagram below:



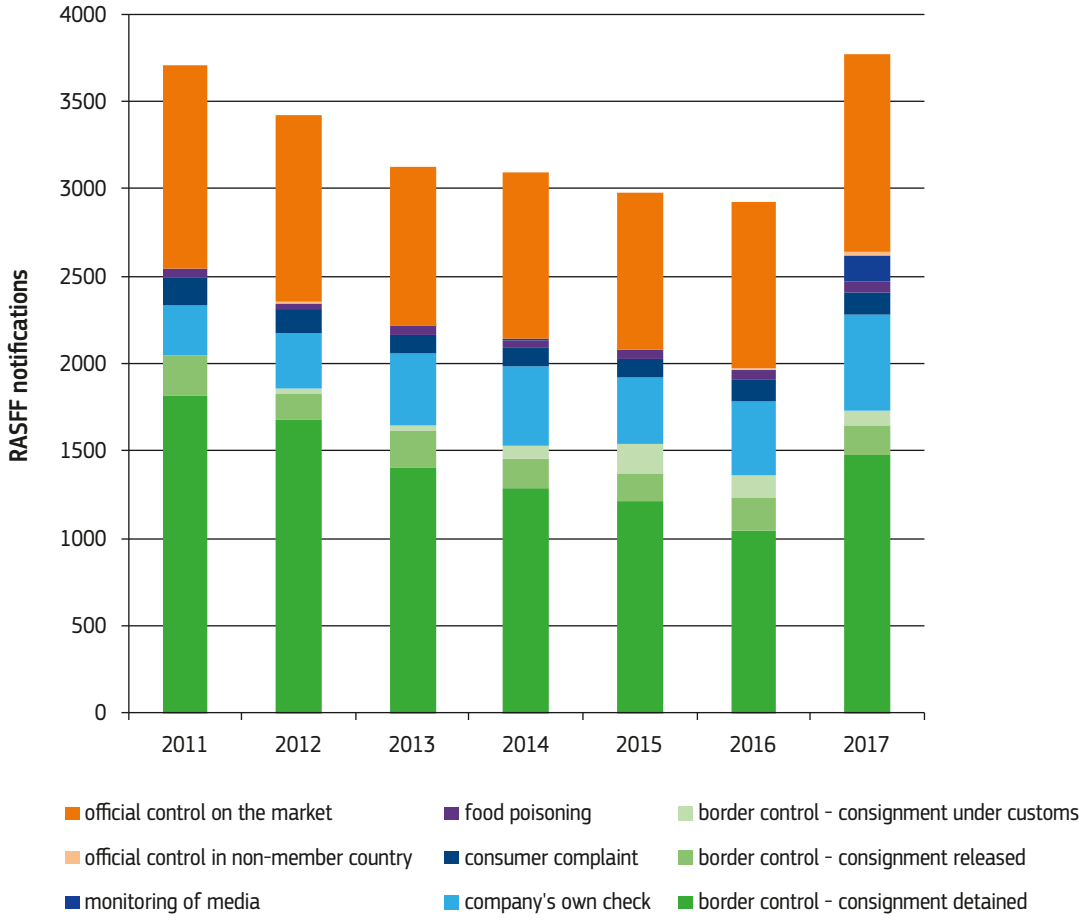
Where do RASFF notifications come from?

In 2017, forty-six percent of RASFF notifications concerned controls at the outer EEA borders ([1]) at points of entry or border inspection posts when the consignment was not accepted for import ("border control – consignment detained"). 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.

The largest category of notifications concerns official controls on the internal market ([2]). 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.

A small number of notifications are 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 2017 there were twelve RASFF notifications and eight RASFF news items reporting on checks carried out in non-member countries. Below you will find more details regarding some of the notifications and news items transmitted:

- In March, Brazilian authorities informed the European Commission that fraud had been



([1]) Since 2009, including Switzerland.

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

discovered with the certification of meat from four poultry meat producers exporting to the EU. As a result, the Commission services sent out a RASFF news and set up reinforced checks for these operators and for further operators, as the incident extended. These reinforced checks lead to a sharp increase in RASFF notifications for Salmonella in poultry meat preparations from Brazil and ultimately in the removal of the authorisation of several operators to export to the EU.

- Two RASFF news items were issued with information from Indian and Brazilian authorities about competent authorities and officers that are authorised to sign health certificates for certain products exported to the EU. Such certificates are required by EU legislation on account of the risk of contamination with aflatoxins.

- A RASFF news item was transmitted by Spain on the finding of Cronobacter sakazakii in infant formulae from Spain by the Dominican Republic. Spain had received this information through the INFOSAN network. However, repeated analyses in Spain as well as by the US FDA at the request of the Dominican Republic could not confirm the initial detection of Cronobacter sakazakii and the RASFF news was withdrawn at the request of Spain.

- Between September and December, Chile notified the RASFF member countries on five occasions about an issue with a consignment. In four cases it concerned residues of oxytetracycline above the MRL which lead to a tracing and withdrawal of the products from the EU market. Reinforced checks set up through TRACES did not detect any recurrence of the issue.

Food poisoning

The term food poisoning, as used in this report, covers a broader spectrum of disease symptoms than the "classic" food poisoning caused by pathogenic bacteria or viruses. Also undesirable chemicals, the composition of a food supplement or insufficient labelling not mentioning an allergenic substance can be the cause of food poisoning. A food poisoning incident is called an outbreak when more than one person is affected by the same source of illness. It is called a multi-country outbreak if the symptoms reported in different geographical locations can be linked back to the same food. The RASFF does not cover all outbreaks or food poisoning incidents that occurred in the EEA in 2017. Usually only incidents that require cooperation between countries lead to a RASFF notification. It is possible that there were food poisoning incidents at the basis of a RASFF notification that were not identified as such.

In 2017, 66 notifications were identified as triggered by a food poisoning event. In addition, 4 RASFF news items were related to food poisoning events, for two of which more information is given here below. In 10 cases consumers suffered from allergic reactions due to the presence of an allergen that was not indicated on the label. As many as 22 food poisoning notifications could be related to elevated histamine levels in tuna. Apart from these, 25 notifications related to pathogenic micro-organisms, 10 of which related to salmonellosis.

In the event of a multi-country foodborne outbreak, coordination at the EU level is important. A Rapid Outbreak Assessment (ROA) is prepared jointly by EFSA and ECDC in close cooperation with the affected countries. Collection and exchange of large amounts of detailed information in particular on the traceability of suspect foods is often facilitated through RASFF news items. 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 prevent a further spread of the outbreak ([3]). Food poisoning cases that have led to ROA and some other interesting food poisoning cases of 2017 are reported below:

- **Multi-country outbreak of *Salmonella* Enteritidis infections linked to Polish eggs (RASFF news 16-824 and notification 2017.0017, 2017.0849, 2017.1419)**: A multi-country outbreak of *Salmonella* Enteritidis associated with contaminated eggs from Poland was confirmed by epidemiological, microbiological and Whole Genome Sequencing (WGS) analysis in 14 EEA countries in 2016 ([4]). The number of cases associated with this outbreak progressively decreased from the end of 2016 to the beginning of 2017. However, the frequency of detection of new outbreak cases increased again after February 2017 and peaked in September. Indeed, on 12 September 2017, Sweden

([3]) Source: EFSA

([4]) See also RASFF annual report 2016, page 10

launched an Urgent Inquiry (UI) in ECDC's Epidemic Intelligence Information System Food- and Waterborne Disease (EPIS-FWD) platform and notified through RASFF 2017.1419 a new cluster of cases. Later, an association with eggs from Poland was reported.

From 1st February 2017 to 28th November 2017, 8 EEA countries (Belgium, Czech Republic, France, Luxembourg, Netherlands, Norway, Sweden and United Kingdom) reported 196 confirmed cases of *Salmonella* Enteritidis belonging to four distinct WGS clusters, and 72 probable cases sharing one of the six *S.* Enteritidis multiple locus variable-number tandem repeat analysis (MLVA) outbreak profiles. On 12 December 2017, the EFSA and ECDC published the Joint ROA on multi-country outbreak of *Salmonella* Enteritidis infections linked to Polish eggs. According to the data reported in RASFF, over 600 consignments with 97 million eggs distributed to 18 EU/EEA and 30 million eggs to 12 third countries were withdrawn. The RASFF system was effective in coordinating the targeted control measures.

- **Histamine intoxication related to tuna consumption in some EU countries (RASFF notifications: 2017.0253, 2017.0343, 2017.0512, 2017.0557, 2017.0572, 2017.0587, 2017.0595, 2017.0603, 2017.0631, 2017.0641, 2017.0674, 2017.0675, 2017.0715, 2017.0742, 2017.0792, 2017.0761, 2017.0770, 2017.0842, 2017.0858, 2017.0930, 2017.0950, 2017.1170, 2017.1375, 2017.1414):**
  In May 2017 Spain, France and Italy each launched a RASFF notification (RASFF 2017.0587, 2017.0595, 2017.0603) reporting cases of scombroid poisoning after consuming yellowfin tuna from two different producers in Spain. On 12 May, Spain posted an Early Warning and Response System (EWRS) notification and an urgent inquiry in the EPIS-FWD platform. On 18 September 2017, France updated the information related to this event through the EPIS-FWD reporting 11 outbreaks between 12 April and 5 July with 40 associated cases, 15 of which had been hospitalised and rapidly discharged. A particular production line for tuna was closed and products concerned were withdrawn from the market and recalled from consumers.

  On 17 May 2017, the European Commission requested EFSA to conduct an assessment of the incidents of histamine intoxication in some EU countries. The assessment was published on 25 September 2017.

- ***Salmonella* Typhimurium in salami from Spain (RASFF notifications: 2017.1511; 2017.1846):** After having launched an UI (UI-434) in the EPIS-FWD platform, Sweden transmitted a RASFF alert (2017.1511) concerning a foodborne outbreak of *Salmonella* Typhimurium, MLVA type 3-19-11-N-311, probably associated with the consumption of salami from Spain on 25 September 2017. In September 2017, also Norway identified one case with *Salmonella* Typhimurium MLVA-type 3-19-11-N-311. On 11 November, Denmark reported a cluster of three cases with isolates (detected in September and October) closely related to the Swedish outbreak strains. Sweden reported a link between human cases and the product supported by microbiological sampling and strong epidemiological evidence, but no samples could be taken in Denmark in relation to this outbreak.

  Another UI (UI-443) in the EPIS-FWD platform reporting an outbreak of 13 *S.* Typhimurium cases probably linked to salami/sliced salami snacks from the same producer in Spain was launched from Denmark on 27 October 2017. In the following days, Denmark shared the information in RASFF (2017.1846). Thirteen isolates had been sequenced belonging to the same cluster.

  Denmark reported that the pH values found in the salami were not suitable for a meat product stable at room temperature before opening (pH 5.3) as was indicated on the labelling, indicating that the fermentation process had not been effective. The fermentation is crucial in the process of diminishing eventual microbial contamination including Salmonella and should be performed in a way as to obtain and maintain a low pH value preferably below pH 5.3.

- **Multi-country outbreak of *Salmonella* Agona infections linked to infant formula (RASFF alert notification 2017.2095):** An outbreak of *Salmonella* Agona linked to the consumption of infant formula (powdered milk) has been ongoing in France since August 2017. After receiving the first notification on 2 December 2017 of an unusual number of *S.* Agona cases in France, the French authorities carried out investigations at

the implicated factory. On 4 December 2017, they informed through RASFF that some of the affected products were exported to other countries. Following investigations at the processing company, all products manufactured since 15 February 2017, including products other than infant formula, were recalled and/or withdrawn, as a precautionary measure. Available evidence from epidemiological investigations in humans and traceability investigations in food identified seven different brands of infant formula from a single processing company in France as the vehicles of infection. In 2017 the outbreak affected 39 infants (children <1 year of age): 37 in France, one in Spain confirmed by WGS and one in Greece, considered to be associated with this event based on the presence of a rare biochemical characteristic of the isolate. The EFSA-ECDC ROA was published on 15 January 2018. According to the data reported in RASFF, over 800 consignments were distributed to 19 EU/EEA and 6800 consignments to 67 third countries. However, broad withdrawal and/or recall measures, export bans and a suspension of market distribution of these batches, implemented since the beginning of December 2017 by the French competent authority and processing company significantly reduced the risk of human infection. Third countries, where the recalled products had been distributed, have been notified through RASFF as well as through INFOSAN.

- **Multi-country foodborne outbreak of *Listeria monocytogenes* IVb, ST6 (RASFF news 17-849; RASFF alert notification 2018.0216):** On 3 November 2017, Finland launched an Urgent Inquiry (UI-444) of three Listeria monocytogenes clusters, confirmed by sequencing, with cases from different parts of Finland in 2017. Between 2015 and 2017, 4 Member States (Austria, Denmark, Sweden, United Kingdom) reported human isolates with close genetic matches with the Finnish Cluster: *Listeria monocytogenes* IVb, ST6. ECDC and affected Member States prepared a European outbreak case definition in November 2017. Information on the multi-country outbreak of *L. monocytogenes* IVb, ST6 was notified in RASFF (RASFF news 17-849) by the European Commission on 26 November 2017. The involved Member States were requested to share any available epidemiological information that could help in identifying the food vehicle associated with this event. Six non-human *L. monocytogenes* isolates detected from 2016 to January 2018 in Austria, Finland, France and Sweden were closely related to the multi-country cluster of *L. monocytogenes* serogroup IVb, ST6. The only common food item in all non-human samples was corn. Traceability information for positive frozen corn samples pointed to frozen corn and frozen vegetable mix products processed/produced in Hungary. Food business operators in Estonia, Finland, Poland and Sweden have withdrawn and recalled the implicated frozen corn products from the market. On 22 March 2018, a Joint ECDC-EFSA Rapid outbreak assessment was published.

  WGS analysis provided a strong microbiological link between the human and the non-human isolates indicative of a common source related to frozen corn and other frozen vegetable mixes, including corn, persisting in the food chain. Traceability information for the contaminated products pointed to the source of the contamination in a freezing plant in Hungary. As *L. monocytogenes* IVb ST6 matching the outbreak strain has been isolated from frozen spinach and frozen green beans sampled at the Hungarian plant, it is possible that frozen vegetables other than corn which have been processed in this plant, could also be implicated as a vehicle of human infection. Further investigations, including thorough sampling and testing, are needed to identify the source of contamination at the Hungarian processing plant concerned. Since March 2018, the implicated Hungarian plant has been under increased official control and no frozen vegetable products from the 2018 production season have been distributed to the market. Following the positive findings from food and environmental samples collected during the 2018 production, freezing activities at the affected Hungarian plant have been halted since June 2018. On 29 June 2018, the Hungarian Food Chain Safety Office banned the marketing of all frozen vegetable and frozen mixed vegetable products produced by the plant between August 2016 and June 2018, and ordered their immediate withdrawal and recall. Food business operators in involved Member States have withdrawn and recalled the implicated frozen corn products from the market. This restrictive measure is likely to significantly reduce the risk of human infections and contain the outbreak. On 3 July 2018, an update of the ROA was published.

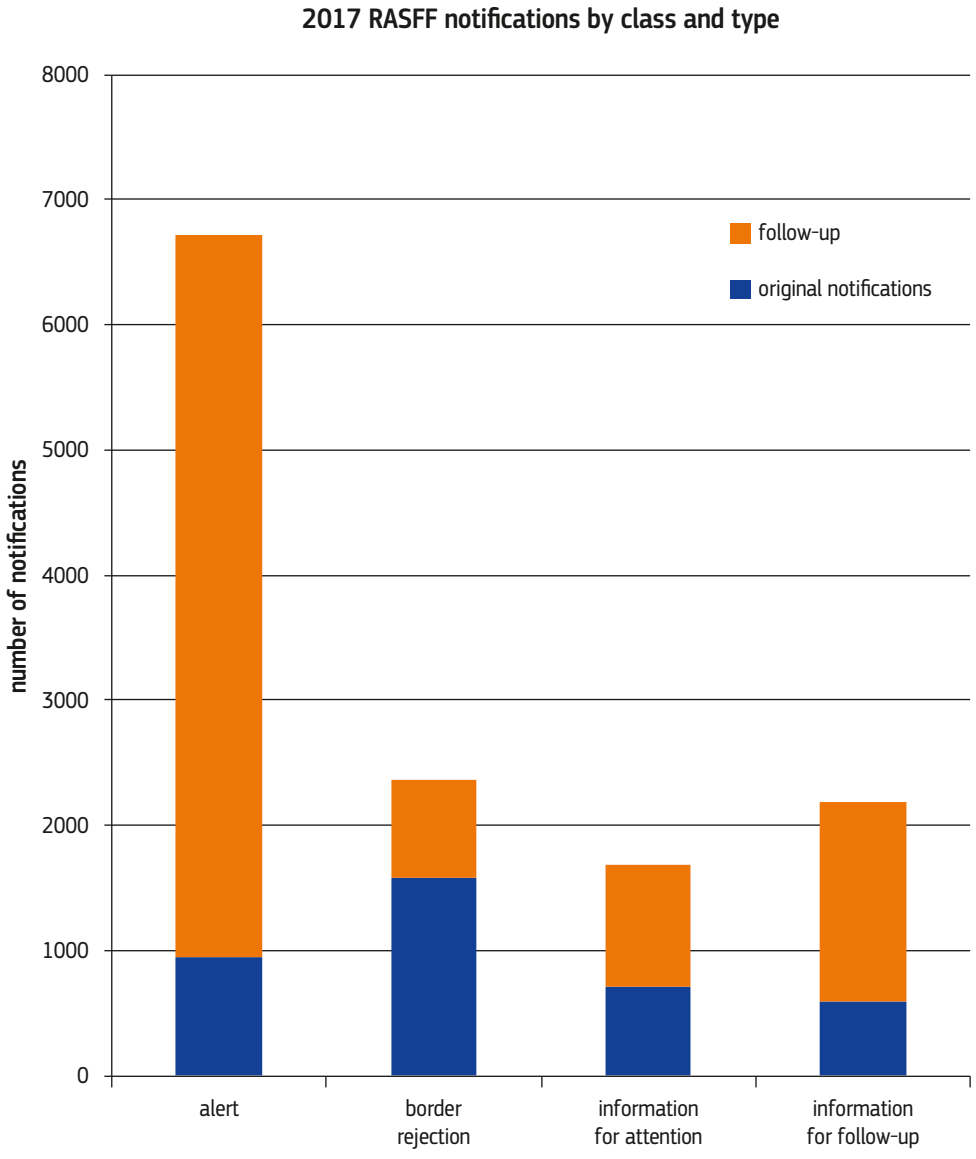
RASFF notifications in 2017

Overall

In 2017, a total of 3832 **original notifications** were transmitted through the RASFF, of which 942 were classified as alert, 596 as information for follow-up, 706 as information for attention and 1588 as border rejection notification. These original notifications gave rise to 9117 **follow-up notifications**, representing an average of 2.4 follow-ups per original notification. For alert notifications this average rises to an impressive 6.1 follow-ups per original notification. Compared to 2016, the number of alert notifications, implying a serious health risk of a product circulating on the market, rose by 11% with 24% more follow-ups transmitted.

The overall figures present a very significant **28% increase** in original notifications compared to 2016 together with a 25% increase in follow-up notifications, resulting in an overall increase of 26%. We have to go back twelve years to 2005 to see a relative increase of activity of this magnitude in the RASFF!

For original notifications, the focus continues to shift to alert notifications although the number of border rejections that had been declining in recent years has now grown substantially as well. The increase in alerts (both follow-ups and original notifications) is significant for the fourth year in a row, this time accompanied by increasing numbers in other notification categories as well.



The RASFF news transmitted internally in the network are not counted in the above figures nor represented in the charts in this report. 19 RASFF news were sent along with 103 follow-ups. Due to a significant decrease in follow-ups, this means that information transmitted as RASFF news decreased by 33% compared to 2016.

This brings the total exchanges in RASFF in 2017 to **13249**, a number which has evidently never been higher. The increase in activity challenges the RASFF network to maintain the same level of efficiency or do even better.

After receipt of follow-up information, 15 alert, 33 information and 18 border rejection notifications were withdrawn ([5]). Notifications that were withdrawn are further excluded from tables and charts.

The European Commission decided, after consulting the notifying countries, not to upload 178 notifications onto the system because, after evaluation, they were found not to satisfy the criteria for a RASFF notification (rejected notifications). This represents a 13% decrease compared to 2016.

RASFF incidents

A novelty introduced in RASFF already in 2016 is identifying incidents that 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 identical products but different lots. Findings about the same lot of a product should in principle be grouped under the same notification with new findings being reported as follow-up notifications.

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 2017 collection:

- Amnesic Shellfish Poisoning (ASP) toxins in live mussels harvested on the same date, involving the same farmer from Ireland
- lead in hunted wild boar from the same producer in Slovenia

Faulty labelling, processing or storage conditions

Here it is an element of the “logistics” that went wrong and led to risks in the food or feed. Typically most incidents reported under this type would be about 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 2017 collection:

- high level of acrylamide in biscuits with apple flavour from Belgium: although there are no legal limits (but only “benchmark levels”) for acrylamide, its elevated content was judged to be a relevant health risk as such biscuits are intended for children. The high level of acrylamide can be ascribed to inappropriate processing conditions. Under controlled circumstances the formation of acrylamide can be kept sufficiently low not to pose any health risk.

Type of incident	number of incidents	notifications involved
accidental or environmental contamination	10	24
faulty labelling, processing or storage conditions	3	16
foodborne outbreak	6	18
foreign body contamination / physical danger	2	4
fraud investigation	2	5
hazardous or unauthorised composition	18	41
intentional contamination / tampering	0	0

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

Foodborne outbreak

An outbreak can be reported in a single notification or there could be several notifications that are linked to one particular outbreak event, in which case an incident of this type is identified.

Examples from the 2017 collection (discussed in more detail under the food poisoning chapter):

- foodborne outbreaks of histamine poisoning related to consumption of thawed vacuum-packed tuna from two different producers in Spain
- Salmonella Agona in infant formula from France
- multi-country outbreak of Listeria monocytogenes Ivb, ST6 linked with frozen corn from Hungary, packaged in Poland

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 there can also be an intentional addition of "foreign matter" leading to a risk, such as the addition of plastic ice moulds to drinks that could lead to suffocation accidents.

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. An example from the 2017 collection is the incident relating to vegetable extracts from the United States used to inject tuna from Spain. In a first notification Spain reported on these extracts that were probably used to achieve a colour fixation of the tuna to make it bright red. Such treatment is not authorised. Information on this issue was also exchanged in the food fraud network ([6]). In a second notification, Spain provided more information on the vegetable extracts themselves and their supply chain.

Hazardous or unauthorised composition

In this type of incident, an ingredient or additive lies at the basis of the health risk. Most of the incidents are related to the coordinated programme on online offered food that was run in the autumn of 2017, focusing mainly on novel food ingredients. Also allergen incidents can fall under this category insofar as these were not caused by faulty labelling or cross-contamination.

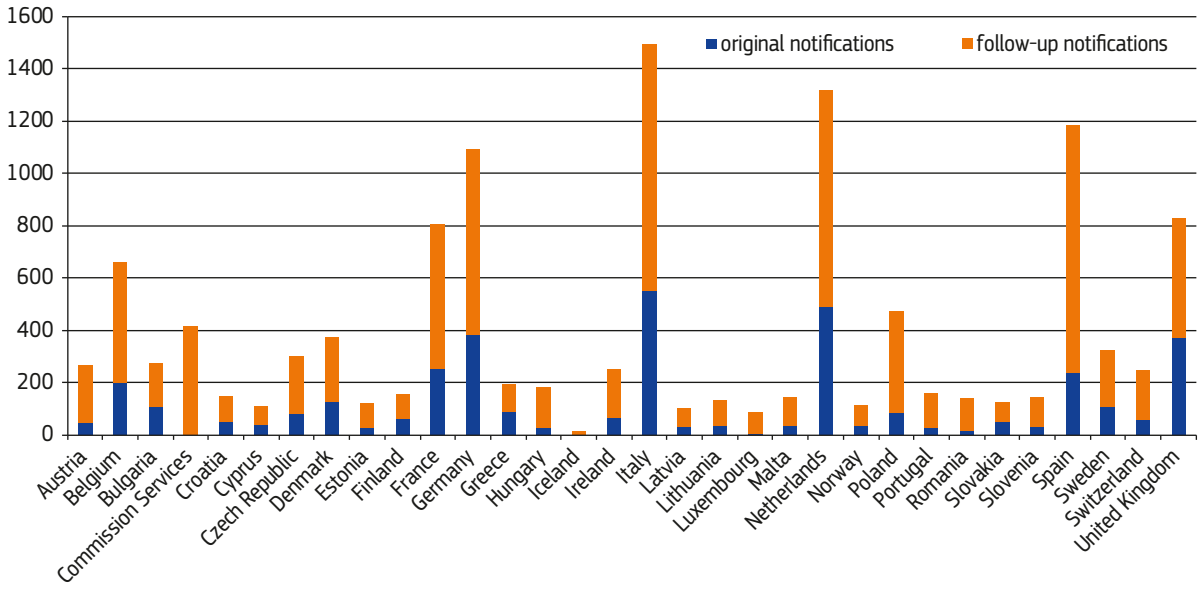
Example from the 2017 collection:

- unauthorised use of colour E 122 - azorubine in pickled turnips from Lebanon (5 notifications): such azo dyes are not authorised in the EU for use in this type of product. Countries exporting to the EU have to ensure that the EU food safety rules are respected. Consumer exposure to such azo dyes must be kept low to ensure that they do not cause any adverse health effect. Also Rhodamine B was detected in pickled turnips from Lebanon (5 notifications). Contrary to the food additive E 122, Rhodamine B is not an authorised as a food colour. It is a suspected carcinogen and should not be anywhere near food. Obviously it is – contrary to E 122 – not labelled. If it is present in sufficient quantity to have a colouring effect, its addition to pickled turnips is regarded as food fraud considering that consumers are misled as regards the quality of the product due to the bright colour. Controls at the border have been reinforced in 2018 with 50% of consignments of pickled turnips from Lebanon requiring analysis for Rhodamine B in accordance with Regulation (EC) No 669/2009. More information regarding this and other food fraud investigations coordinated by the European Commission can be found at: https://ec.europa.eu/food/safety/food-fraud/successful-stories_en.

([6]) More information in the Food Fraud Network annual report 2017 at https://ec.europa.eu/food/sites/food/files/safety/docs/food-fraud_network_activity_report_2017.pdf

RASFF notifications by notifying country in 2017

Original and follow-up notifications by notifying country in 2017



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
Salmonella	poultry meat and poultry meat products	Netherlands	162
mercury	fish and fish products	Italy	98
aflatoxins	nuts, nut products and seeds	Netherlands	82
Salmonella	poultry meat and poultry meat products	Germany	73
fipronil	eggs and egg products	Italy	69
aflatoxins	nuts, nut products and seeds	Germany	66
Salmonella	poultry meat and poultry meat products	United Kingdom	58
aflatoxins	nuts, nut products and seeds	Italy	46
aflatoxins	nuts, nut products and seeds	Spain	42
absence of health certificate(s)	nuts, nut products and seeds	United Kingdom	32

Country fact sheets

 Austria

 Belgium

 Bulgaria

 Croatia

 Cyprus

 Czech Republic

 Denmark

 Estonia

 Finland

 France

 Germany

 Greece

 Hungary

 Iceland

 Ireland

 Italy

 Latvia

 Lithuania

 Luxembourg

 Malta

 Netherlands

 Norway

 Poland

 Portugal

 Romania

 Slovakia

 Slovenia

 Spain

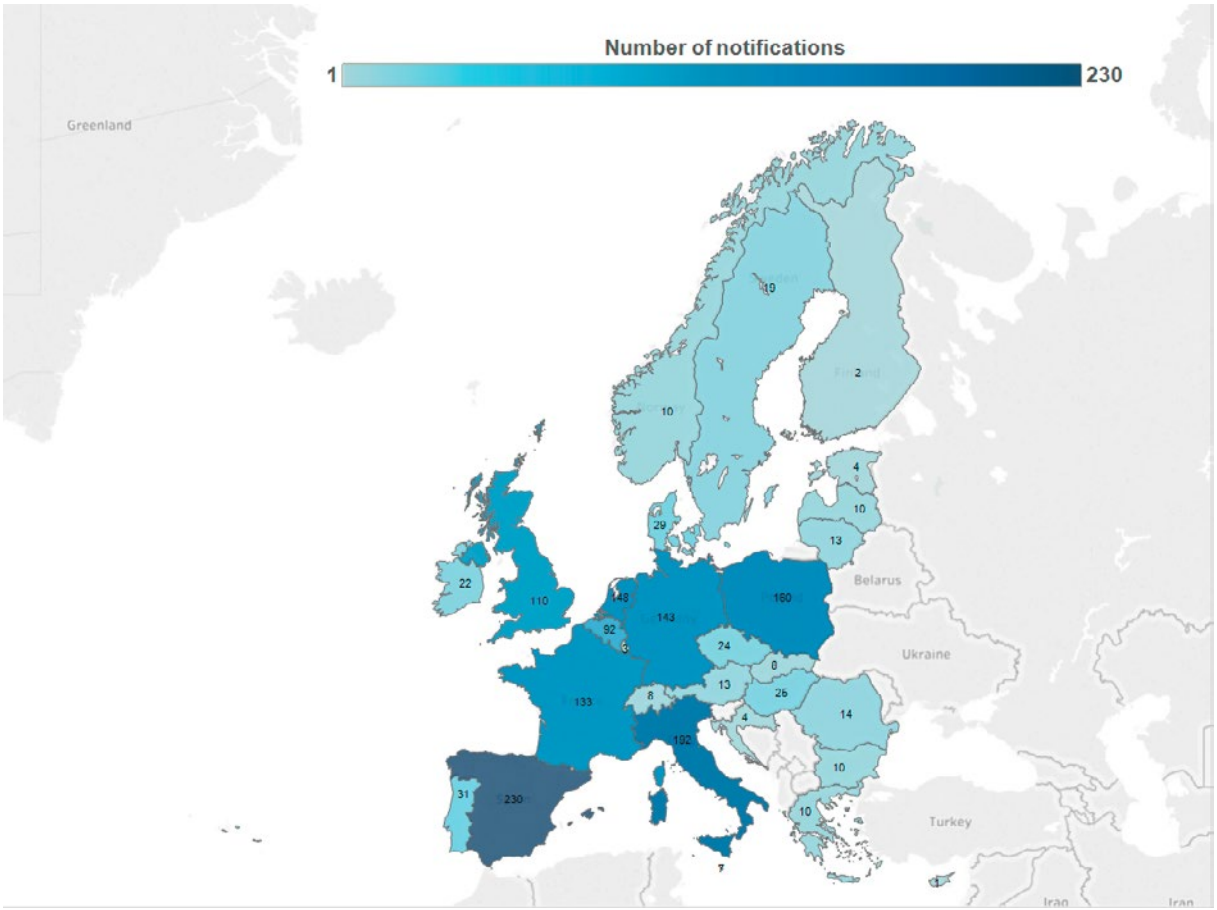
 Sweden

 United Kingdom

 Switzerland

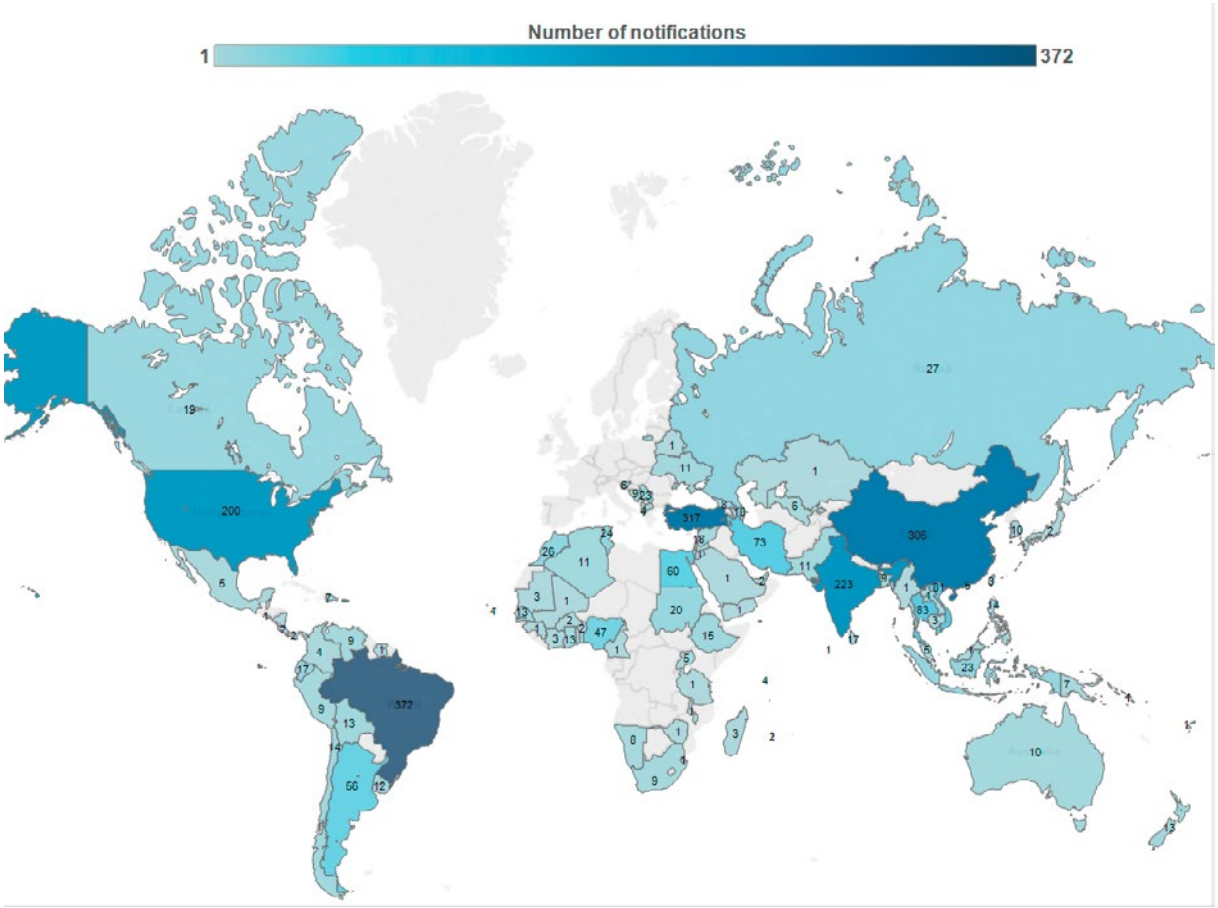
RASFF notifications by country of origin in 2017

Origin member countries in 2017 ([7])



([7]) Member countries of RASFF identified as the origin of the product notified, expressed in number of notifications per country of origin.

Origin non-member countries in 2017



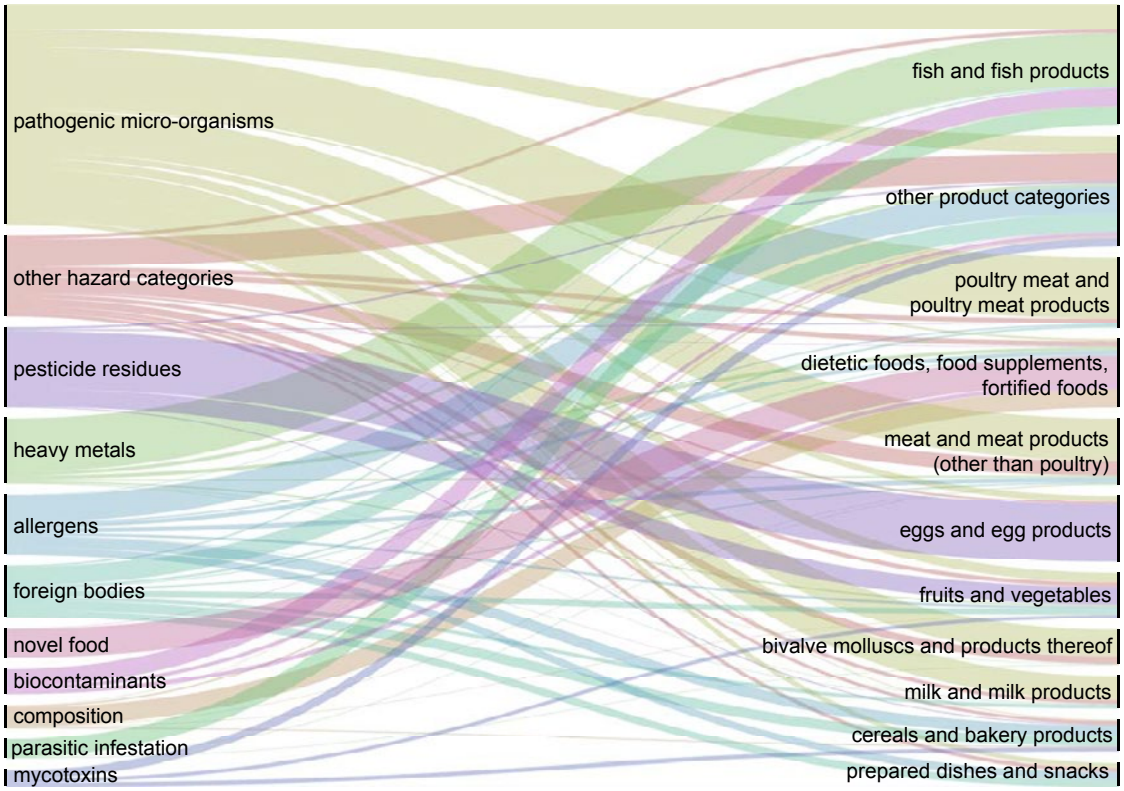
Top 10 number of notifications by country of origin

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

hazard	product category	origin	notifications
Salmonella	poultry meat and poultry meat products	Brazil	320
pesticide residues	fruits and vegetables	Turkey	83
aflatoxins	nuts, nut products and seeds	China	81
mercury	fish and fish products	Spain	80
unauthorised novel food (ingredient)	dietetic foods, food supplements, fortified foods	United States	77
aflatoxins	fruits and vegetables	Turkey	70
fipronil	eggs and egg products	Italy	66
aflatoxins	nuts, nut products and seeds	Turkey	65
aflatoxins	nuts, nut products and seeds	Iran	50
Salmonella	poultry meat and poultry meat products	Poland	50

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 looked into in more detail, while identifying recurrent issues (more than 10 notifications) and operators (operators that were notified in RASFF three times or more in a three-month period).

2017 top 10 hazard and product categories on food products originating from member countries



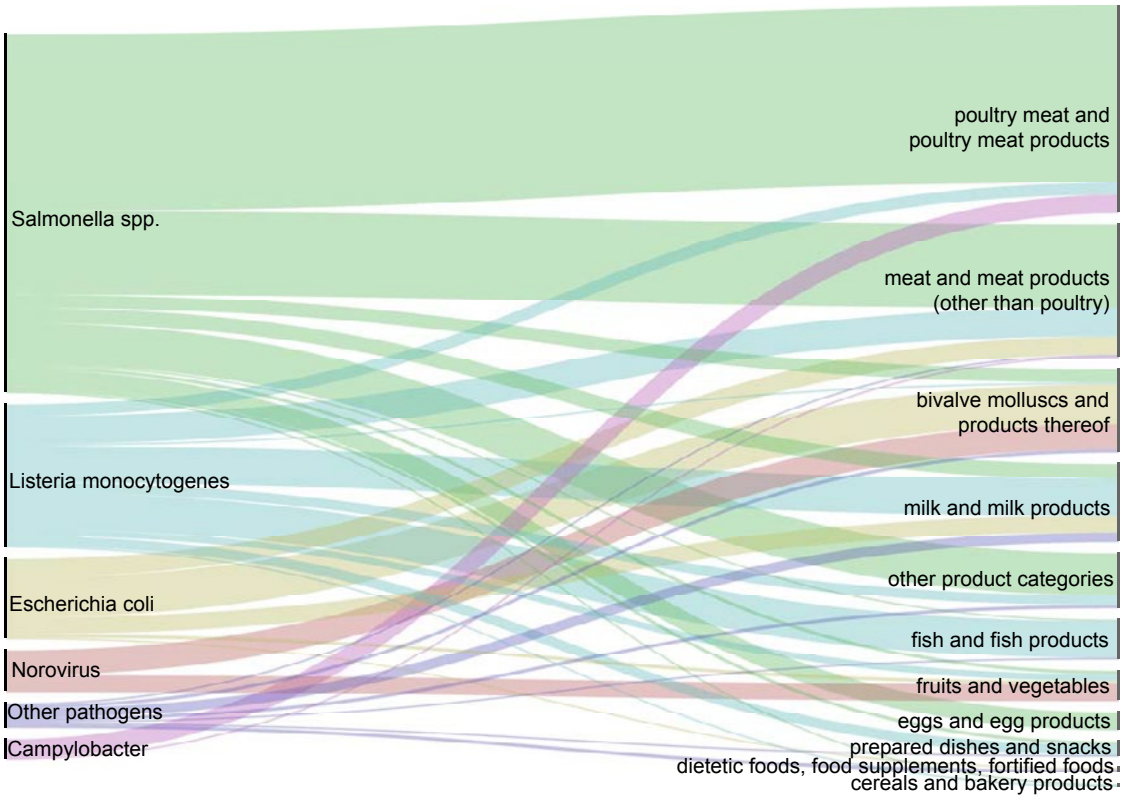
Pathogenic microorganisms

414 notifications

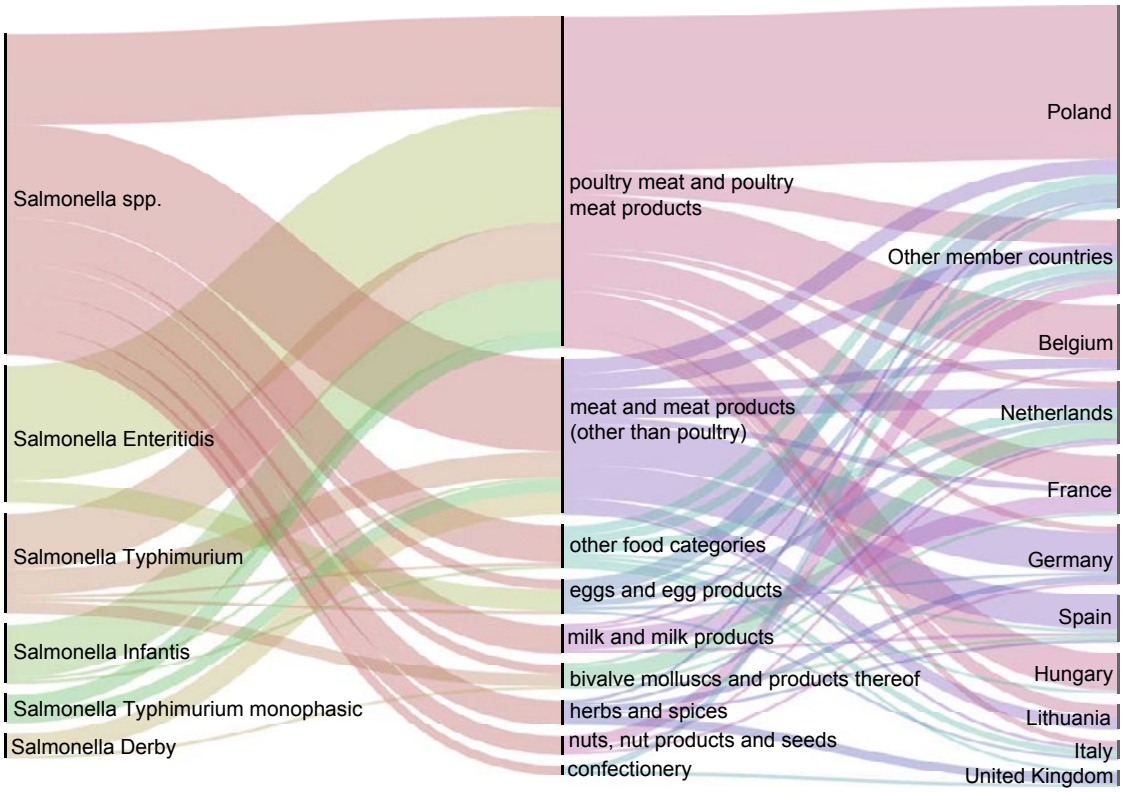
The Sankey diagram above shows that a significant part of the RASFF notifications on products from member countries concern pathogenic micro-organisms in food of animal origin mostly. The diagram below provides more detail about this. There has been an 18% increase in notifications on pathogenic micro-organisms in 2017 compared to 2016.

Salmonella

Salmonella is more than ever the most frequently reported pathogen in food from member countries (207 notifications, up by 22%) but the same goes for non-member countries (471 notifications, see later in this report). Meat is taking up the bulk of the notifications but also some notifications were made for egg products with *Salmonella* Enteritidis in particular.


Salmonella spp.
Listeria monocytogenes
Escherichia coli
Norovirus
Other pathogens
Campylobacter
poultry meat and poultry meat products
meat and meat products (other than poultry)
bivalve molluscs and products thereof
milk and milk products
other product categories
fish and fish products
fruits and vegetables
eggs and egg products
prepared dishes and snacks
dietetic foods, food supplements, fortified foods
cereals and bakery products

***Salmonella* serotypes reported in 2017, set out against food product category set out against country of origin**



This diagram shows that many of the notifications report on non-compliances of fresh poultry with the food safety criteria for *Salmonella* Enteritidis and *Salmonella* Typhimurium but that there are also many other notifications made in various food products, mainly of animal origin.

Recurrent notifications:

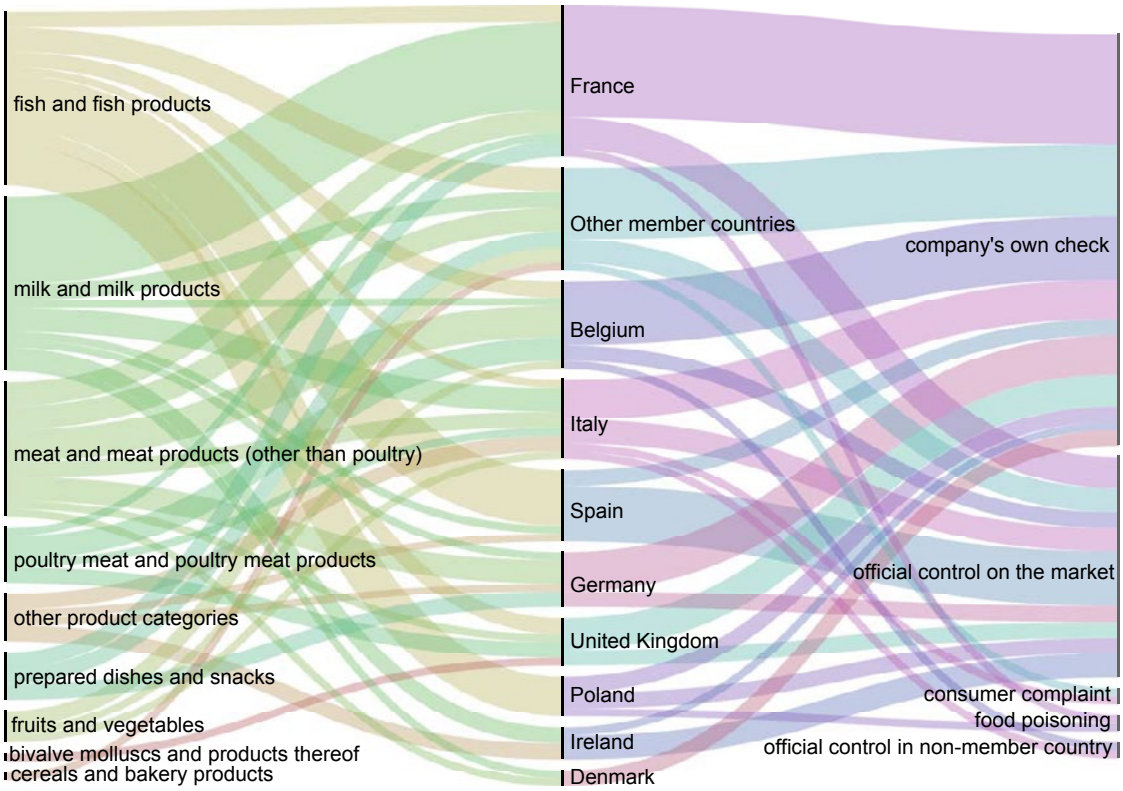
There were 43 notifications on *Salmonella* in poultry products originating from Poland, most often (28 notifications) concerning *Salmonella* Enteritidis in fresh poultry. Five operators were identified as recurrent.

Listeria monocytogenes

The Sankey diagram below shows that fish was most frequently notified for *Listeria monocytogenes* contamination. The fish in question is predominantly smoked salmon. Other smoked fish products are also notified, such as smoked trout. But smoked fish is not the reason why France is the most frequently notified country for *Listeria monocytogenes*. The main reason for this are companies' own checks on cheeses (10 notifications), most of them notified by France. For 2 notifications where other countries than France notified, the original findings went back to the own checks of the producer in France and subsequent withdrawal. The products involved are often cheeses made from raw milk.

The diagram also demonstrates that companies' own checks are most often the trigger for *Listeria monocytogenes* notifications, not only for cheese. The third most frequently notified product category is meat and meat products other than poultry. Regulation (EC) No 2073/2005 sets a food safety criterion for ready-to-eat products; therefore raw foods requiring cooking are usually not notified. However, in 2017, a large scale multi-country foodborne outbreak investigation identified frozen corn as the likely source of the outbreak. Although the producer considered the corn to be a product intended for cooking, in practice the product ended up in consumer products that were also consumed raw. More details on this case are in the chapter on food poisoning.

***Listeria monocytogenes* notifications in 2017 by food product category, set out against member country of origin, set out against notification basis**



Recurrent notifications:

France was notified 11 times for Listeria monocytogenes in cheese. There were no recurrent operators.

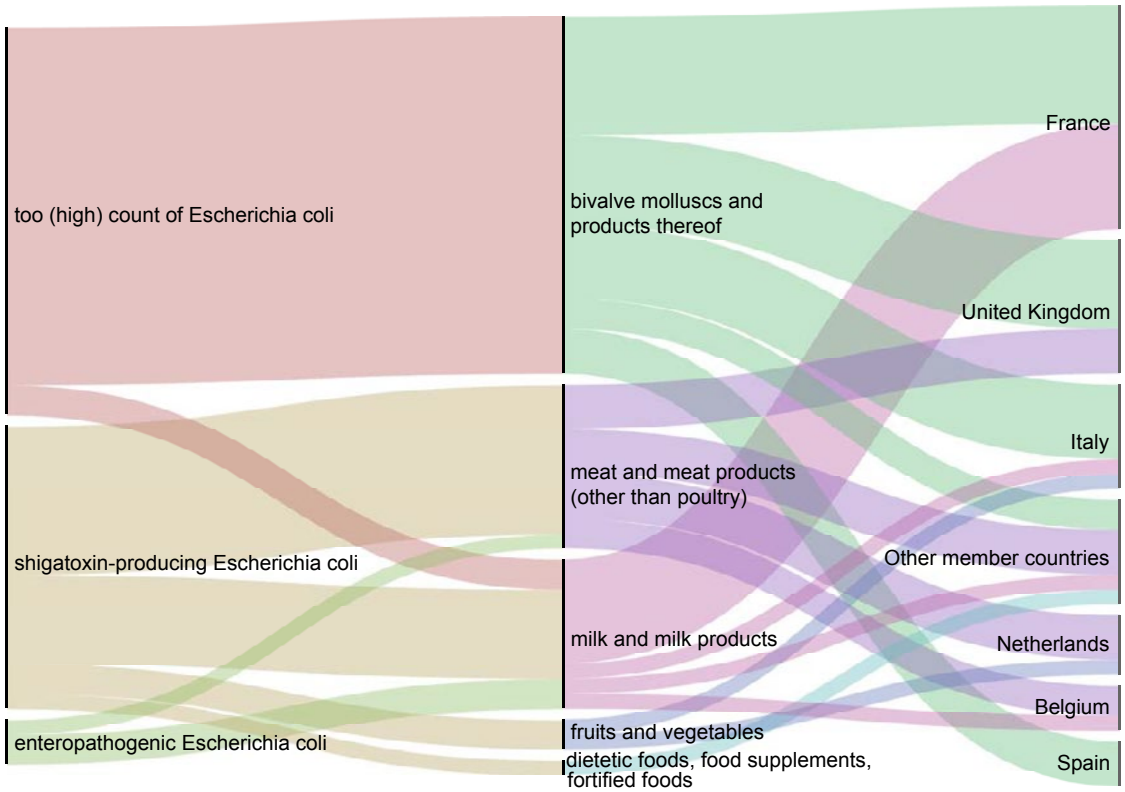
Escherichia coli

The Sankey diagram below provides an insight into *Escherichia coli* notifications in RASFF in 2017. The top type of notification for (mainly) too high count of *Escherichia coli* is related to the food safety criterion for live bivalve molluscs. Whereas mussels from Spain (see RASFF annual report 2016) were in the majority in 2016, now the "lead" is taken over by France, followed closely by the United Kingdom and Italy.

Shigatoxin-producing *Escherichia coli* can cause foodborne illness because of its capacity to produce toxins. As the capacity of the strain to really cause illness depends on a lot of factors, it is usually 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 and cheeses.

Enteropathogenic *Escherichia coli* are strains that lack the genes to produce shigatoxins but have genes that code for their ability to attach to the bowel and cause damage to it.

***Escherichia coli* notifications in 2017, set out against food product category set out against member country of origin**



Recurrent notifications: none

Norovirus

There were 23 notifications concerning norovirus, 10 of which reported norovirus in live oysters from France, with two recurrent operators. There were 6 notifications on norovirus in different kinds of berries, mostly strawberries and raspberries.

Campylobacter

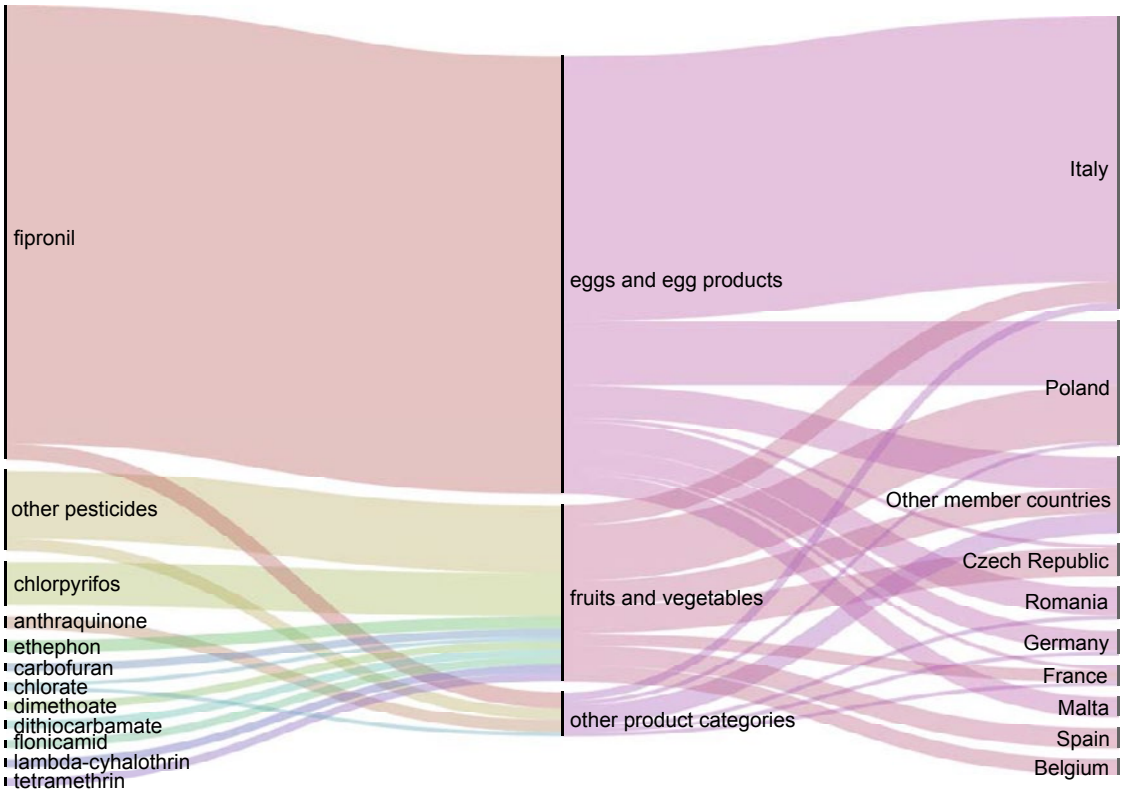
Denmark notified 10 times on the presence of Campylobacter, mostly in fresh chicken. There was also one notification from Poland regarding pork necks from Spain.

Fipronil in eggs

109 notifications

Pesticide residues ranked second in the top 10 hazards for products originating from member countries. This is mainly due to the incident concerning the discovery of fipronil residues in eggs. It should however be noted that the presence of fipronil in eggs was related to an illegal use of fipronil as a veterinary medicinal product or biocide and not related to its use as a pesticide.

Pesticide residues notified in 2017, set out against food product category set out against member country of origin



On 20 July, Belgium notified the RASFF about a particularly high residue level of fipronil in fresh eggs. The notification was classified as alert considering that the estimated short term intake (ESTI) exceeded the acute reference dose. In other words, an acute adverse health effect could not be excluded ([8]). It soon became clear that it concerned an illegal treatment of laying hen farms with a product that was advertised to be very effective against red mites. It also became apparent that a very substantial number of farms had been treated by a service company and that a great deal of the eggs on the market particularly in the Netherlands but also in Belgium and in Germany, contained residues of fipronil. Fortunately, out of the many analyses that ensued, it turned out that out of the hundreds of results only just a few were higher than 0.72 mg/kg, the level at which a health risk cannot be excluded. Nevertheless, important quantities of eggs coming from treated farms contained quantifiable residues of fipronil. This meant that these eggs were required to be traced and withdrawn from the market, as they were not in line with food safety regulations, the maximum residue limit (MRL) for fipronil in eggs being 0.005 mg/kg. This limit was set at the analytical limit of quantification (LOQ) taking into account the fact that the substance is not authorised for use in laying hen farms. The sometimes confusing and not always consistent public communication by the Member States involved contributed to a situation where the effectiveness of the food safety system was questioned by the media and by society.

Many of the follow-ups to the notification 2017.1065 on the fipronil contamination concerned traceability information of the eggs to enable the authorities to take contaminated eggs from the market. In total, 719 follow-up notifications to RASFF notification 2017.1065 were transmitted in 2017, which is more than three times the highest number of follow-ups in any previous incident. The table below shows the number of follow-up notifications for countries that were most involved in the incident, although almost all Member States got involved at some point during the course of the incident.

([8]) The risk evaluation was performed according the instructions of RASFF WI 2.2, available here.

member country	number of follow-ups
Belgium	99
Germany	131
The Netherlands	225
France	31
Denmark	24

The data appears quite different when looking at the number of original notifications on fipronil in eggs and egg products that were notified after the first case in 2017.1065 (table below). Belgium even has zero notifications as all findings were related to notification 2017.1065, for which no origin of the contaminated eggs was specified given that the contamination was linked to the illegal treatments carried out by the same service company on many chicken farms in Belgium, the Netherlands and in Germany.

In the first month following notification 2017.1065 only one other (original) notification was made concerning fipronil in eggs from the Netherlands, by Luxembourg, but that notification could be linked to the same contamination source as in 2017.1065. After that, notifications started coming in from other member countries out of the results of their monitoring of eggs. As such, especially Italy but also Poland and Malta sent notifications following findings on their domestic market without distribution to other countries. Despite the many notifications none of the business operators were recurrent which may be indicative of farms producing on a smaller scale. Unfortunately it was not clarified whether the repeated findings in e.g. Italy could be related to repeated fraudulent applications by the same service company in those many farms.

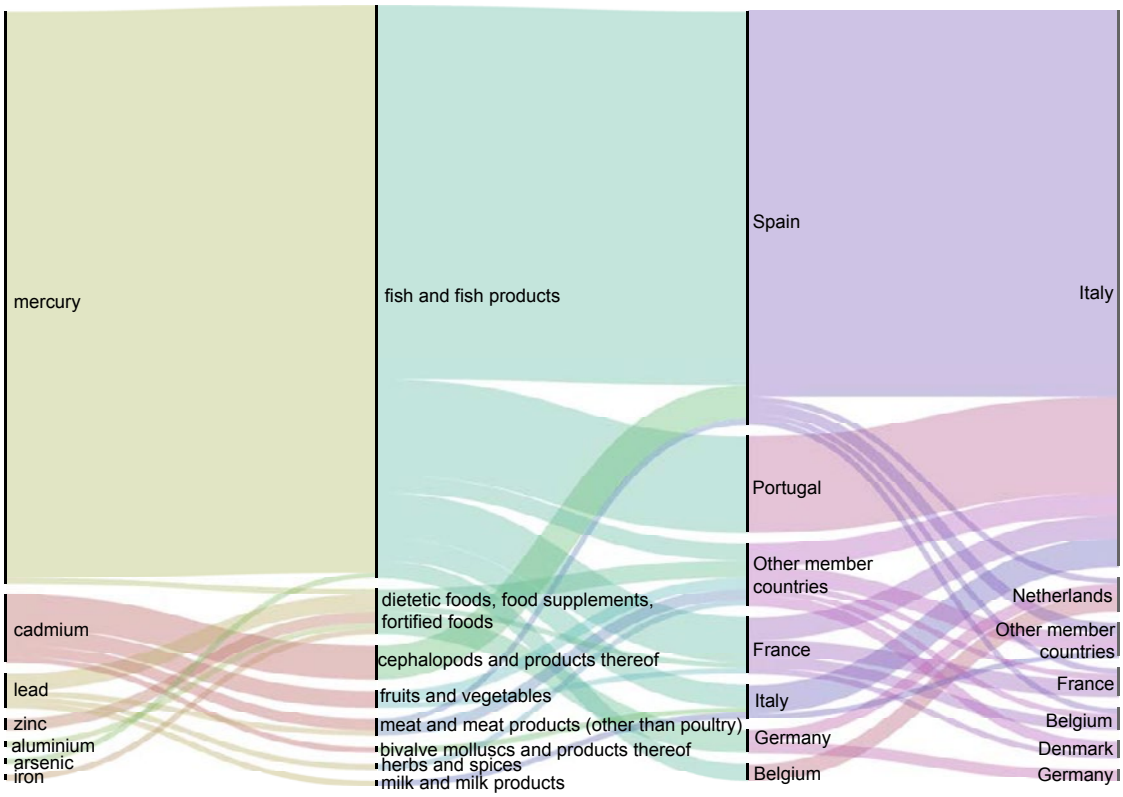
member country	number of original notifications on fipronil in 2017
Belgium	0
Germany	5
The Netherlands	5
France	1
Denmark	0
Italy	67
Poland	18
Romania	8
Malta	5
other	3

Heavy metals

122 notifications

The diagram on heavy metals shows that the issue is still dominated by the findings of mercury in fish, mostly from Spain and predominantly notified by Italy (see recurrent notifications below). Compared to 2016, there are more notifications on mercury in fish with a different origin than Spain, notably from Portugal. Apart from mercury, also lead and cadmium are harmful heavy metals, with maximum limits set in EU legislation.

Heavy metals notified in 2017, set out against food product category, set out against member country of origin set out against notifying country



Recurrent notifications

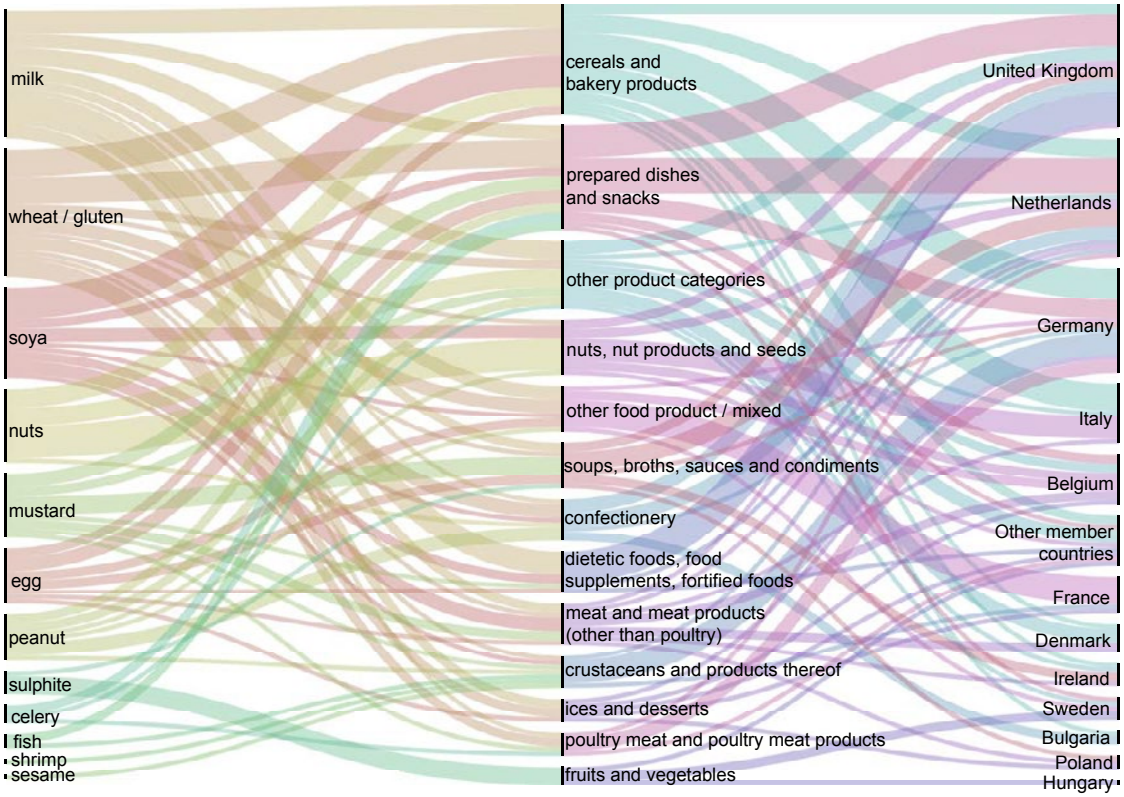
Mercury in swordfish is the most recurrent issue with 61 notifications, of which 47 notified by Italy on swordfish of Spanish origin. Of these 47 notifications, 15 relate to the involvement of recurrent operators.

Allergens

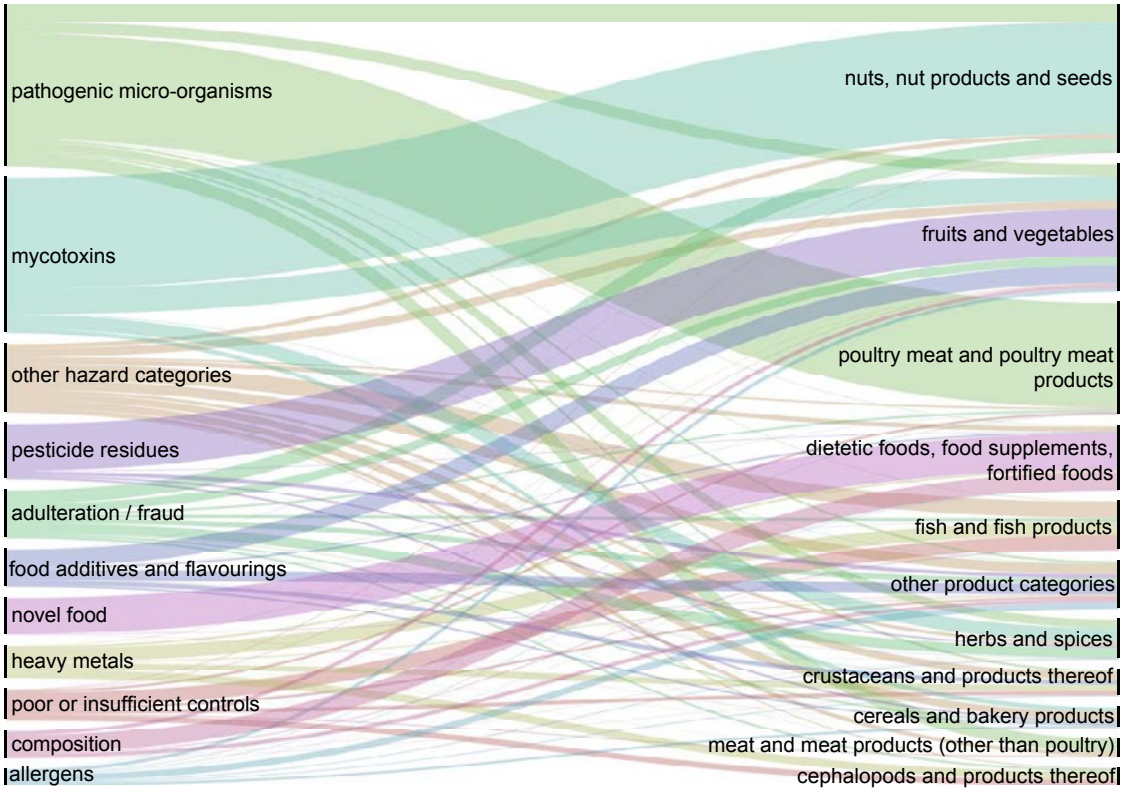
114 notifications

Milk, gluten, soya and nuts are the most commonly reported allergens. Cereals and bakery products are the most often notified. Not all allergen issues are harmonised in EU legislation. Quite often, traces of allergens are notified which occur 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 the EU level.

Allergens notified in 2017, set out against food product category set out against member country of origin



2017 top 10 food hazard and product categories on notified products from non-member countries

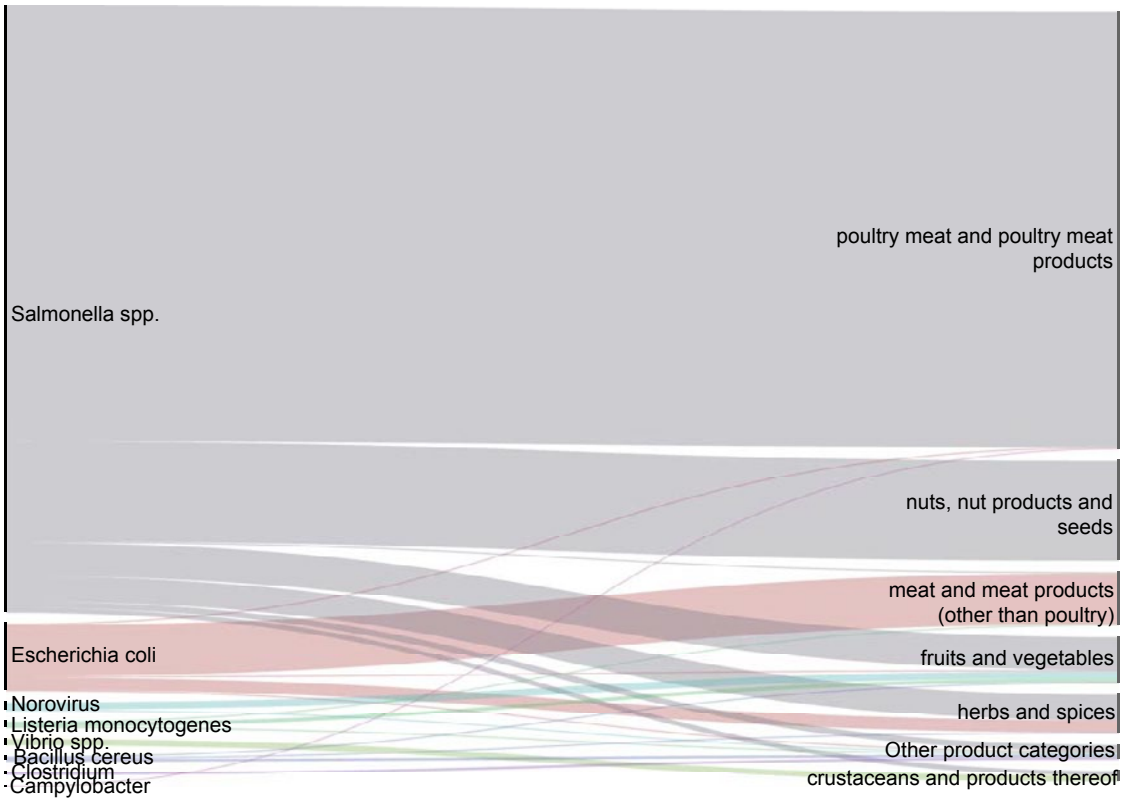


For the first time in a very long time, the number of notifications on pathogenic micro-organisms in food from non-member countries is higher than the number on mycotoxin issues. It is related to the many checks on poultry from Brazil as explained on page [].

Pathogenic microorganisms

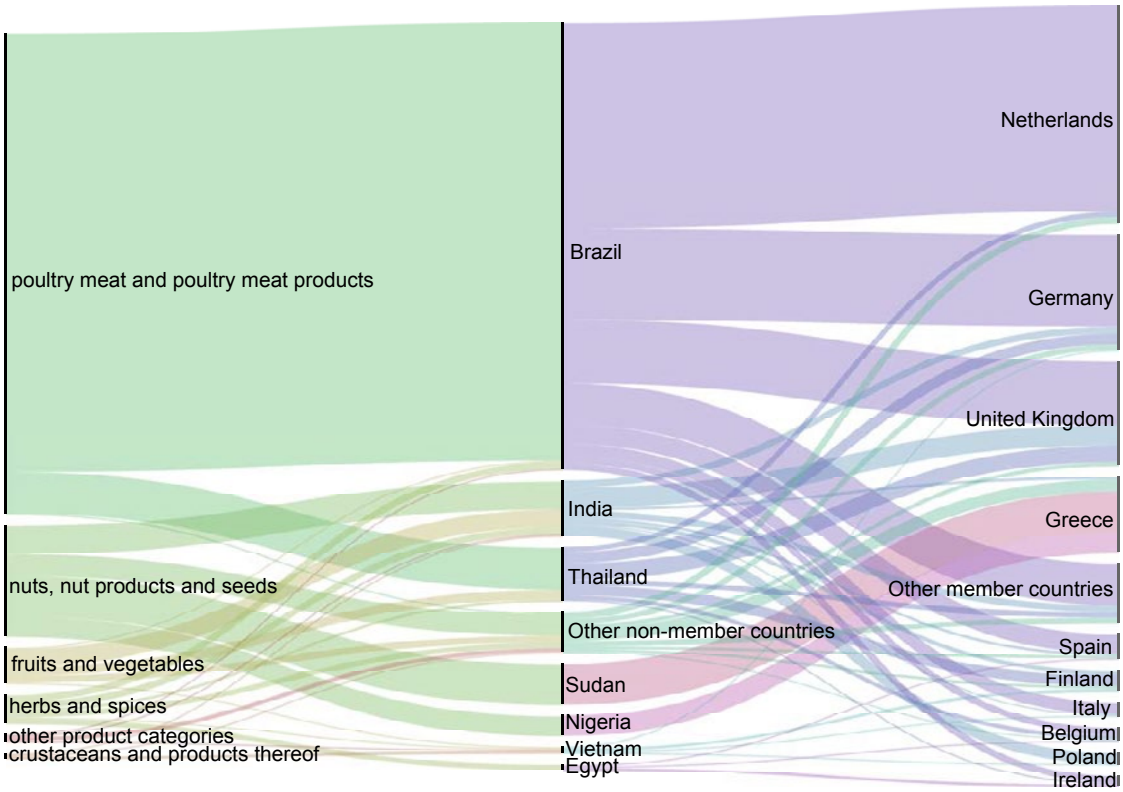
561 notifications

Pathogen reporting for food from non-member countries is more than ever dominated by *Salmonella* findings. The next Sankey diagram provides detail of the *Salmonella* notifications for food from non-member countries and clarification is offered for the huge increase in notifications.


Salmonella spp.
Escherichia coli
Norovirus
Listeria monocytogenes
Vibrio spp.
Bacillus cereus
Clostridium
Campylobacter
poultry meat and poultry meat products
nuts, nut products and seeds
meat and meat products (other than poultry)
fruits and vegetables
herbs and spices
Other product categories
crustaceans and products thereof

Salmonella

2017 food product categories for *Salmonella* notifications, set out against non-member country of origin set out against notifying country



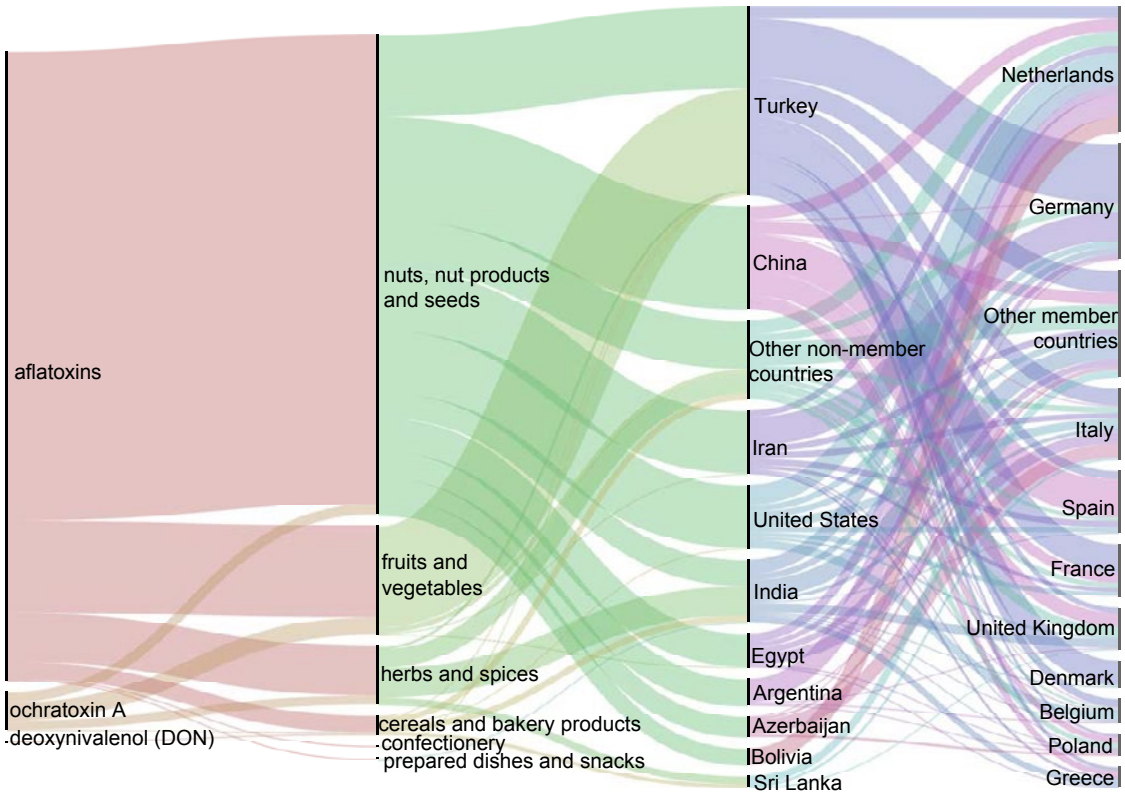
Recurrent notifications are:

- Poultry meat from Brazil – 320 notifications (293 of which border rejections), mostly notified by the Netherlands, Germany and the United Kingdom
- Sesame seeds from India – 18 notifications (all but one of which border rejections)
- Betel leaves from India – 12 notifications (all of which border rejections), all notified by the United Kingdom
- Chicken meat from Thailand – 30 notifications (of which 21 border rejections)
- Sesame seeds from Sudan – 17 notifications (of which 16 border rejections notified by Greece)
- Sesame seeds from Nigeria – 12 notifications (of which 11 border rejections notified by Greece)

Mycotoxins

529 notifications

Mycotoxin types notified in 2017, set out against food product category, set out against non-member country of origin set out against notifying country



Compared to 2016, aflatoxins even more dominantly the type of mycotoxin most reported in RASFF in 2017. Particularly the food category nuts, nut products and seeds grew, mainly due to higher numbers of notifications concerning groundnuts from China and from India. Particularly the significant increase in notifications on dried figs keeps Turkey firmly at the top as most notified country of origin.

Recurrent notifications are:

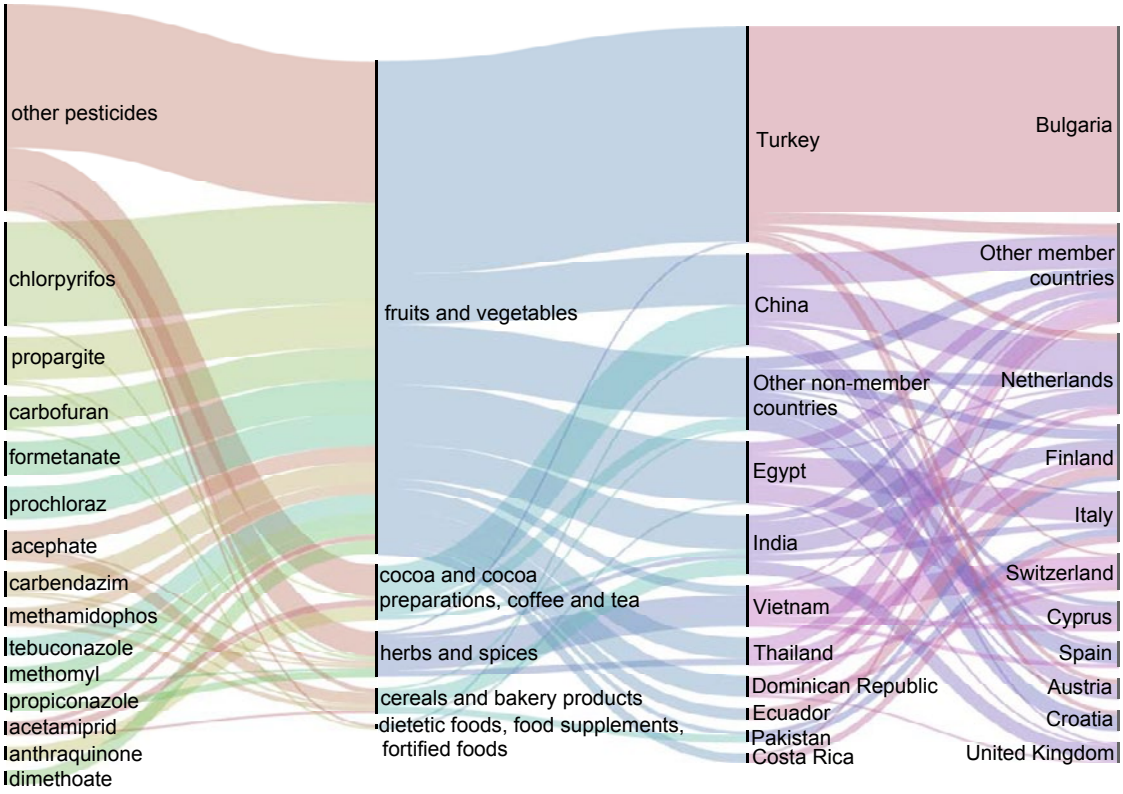
- hazelnuts from Turkey – 33 notifications (of which 30 border rejections)
- pistachio nuts from Turkey – 26 notifications (of which 25 border rejections)
- dried figs from Turkey – 70 notifications (of which 59 border rejections)
- groundnuts from China – 81 notifications (of which 80 border rejections)
- pistachio nuts from Iran – 49 notifications (of which 42 border rejections)
- groundnuts from the United States – 11 notifications (all of which are border rejections)
- pistachio nuts from the United States – 32 notifications (of which 26 border rejections)
- groundnuts from India – 20 notifications (of which 17 border rejections)
- chilli peppers from India – 18 notifications (of which 16 border rejections)
- groundnuts from Egypt – 25 notifications (all of which are border rejections)
- groundnuts from Argentina – 21 notifications (of which 20 border rejections)
- hazelnuts from Azerbaijan – 17 notifications (all of which are border rejections)
- groundnuts from Bolivia – 13 notifications (all of which are border rejections)

Pesticide residues

186 notifications

The number of notifications on pesticide residues in imports into the EU dropped significantly compared to 2016. 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, as can be deduced from the Sankey diagram below.

Food product categories for pesticide residues notifications in 2017, set out against non-member country of origin set out against notifying country



As many as 132 out of the 186 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 Regulation (EC) No 669/2009, which is reviewed twice yearly, requiring intensified checks at the border.

From 1 January 2016 however, working instruction 2.2 is applied in RASFF for evaluating the risk posed by pesticide residue notifications on the basis of a short term intake exceeding the acute reference dose for a pesticide active substance. If the acute residue dose is not exceeded, no health risk is expected. From 2016 onwards therefore, for notifications made in RASFF on pesticide residues, the residue level is sufficiently high to not allow excluding an acute health risk to the consumer. For some substances however, the acute reference dose is not determined while an acute health risk is not ruled out. Such notifications are accepted if these substances are found in levels above the MRL. Propargite is one such substance.

Recurrent notifications

- Sweet peppers from Turkey: 57 notifications (55 of which are border rejections), mostly notified by Bulgaria

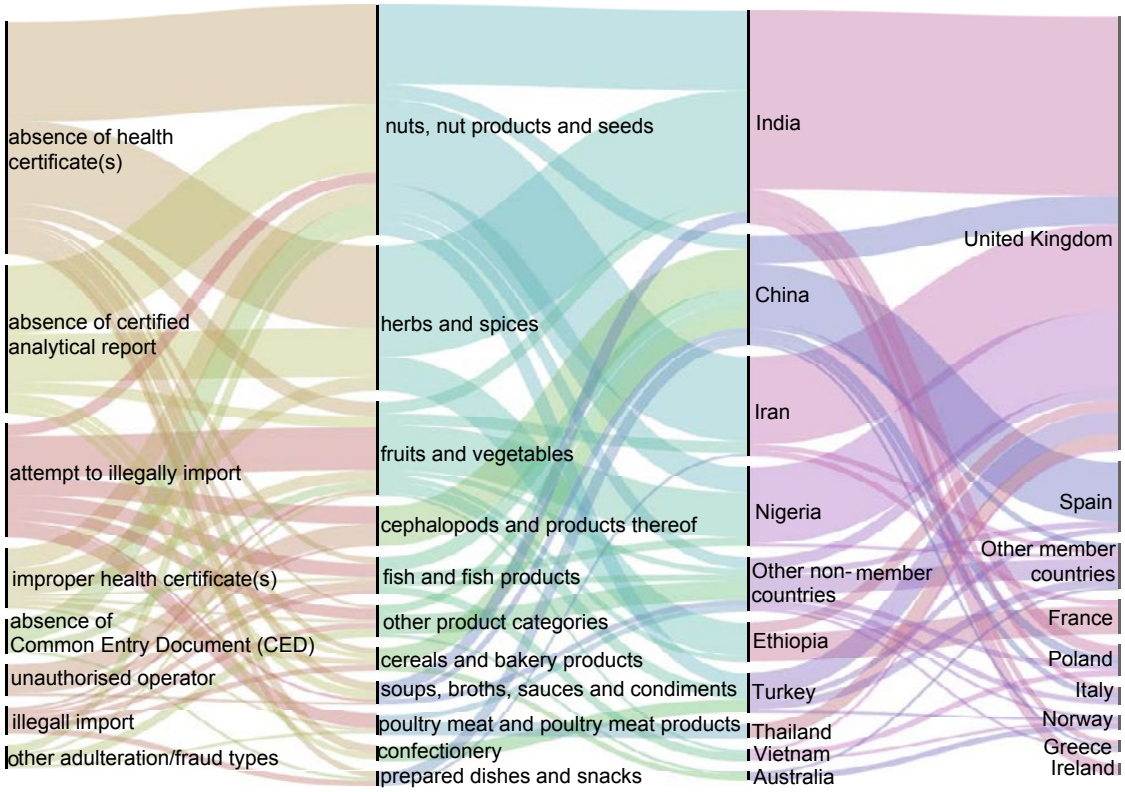
Adulteration/fraud

183 notifications

This category of notifications contains issues that could be the result of an adulteration or a fraud, but the majority of the notifications most likely are not. What's in the can?

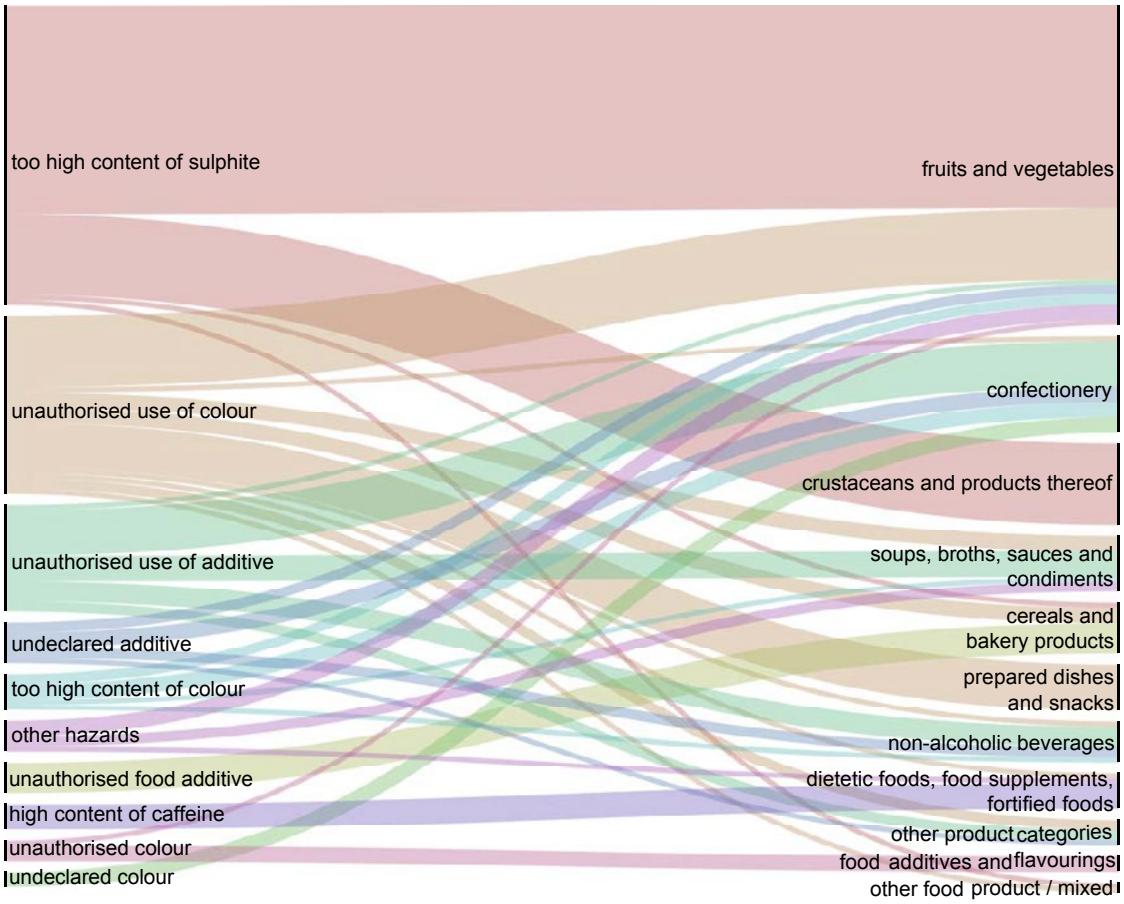
- Health certificate issues: health certificates are sometimes required for importing a product into the EU. The certificates can be absent from the consignment or may not have the proper form and content requirements prescribed by legislation. Sometimes they are suspected of being falsified.
- Illegal import: some commodities are not allowed to be imported or have to be declared to food safety authorities to be checked prior to import.
- Commodities that need to be checked prior to import require a Common Entry Document (CED) or Common Veterinary Entry Document (CVED) for products of animal origin.
- Unauthorised operator: for some commodities, operators need authorisation to import into the EEA. This is the case for products of animal origin, for which lists per country of authorised operators are kept by the European Commission. For other commodities e.g. plant extracts, there may be national requirements for authorisation.

Irregularities notified in 2017 set out against food product category, set out against non-member country of origin set out against notifying country



Food additives and flavourings

132 notifications



Issues involving food additives are often looked upon by consumers with suspicion. It is assumed that those "E numbers" are probably not very good for health. Quite opposite to popular belief, the E numbers derived from European legislation provides food business operators with a - strictly regulated - choice of safe substances to improve their food products. Any food additive use needs to be properly indicated on the food label. Before a food additive is authorised, a comprehensive dossier needs to be presented, not only proving that the substance presents no health risk to consumers, but also demonstrating the technological need and specifying how it benefits consumers.

Most notifications concern a non-respect of the imposed dosage of a food additive in a particular food. Such "too high content" only rarely presents a real risk to consumers. From all food additive notifications, only very few were evaluated as presenting a "serious risk". Examples in 2017 were the additives E 245 - konjac, E 407 - carrageenan and E 415 - xanthan gum, which are gelling agents unauthorised in jelly-type confectionery, because the resulting consistency of the sweets might present a suffocation risk.

Recurrent notifications

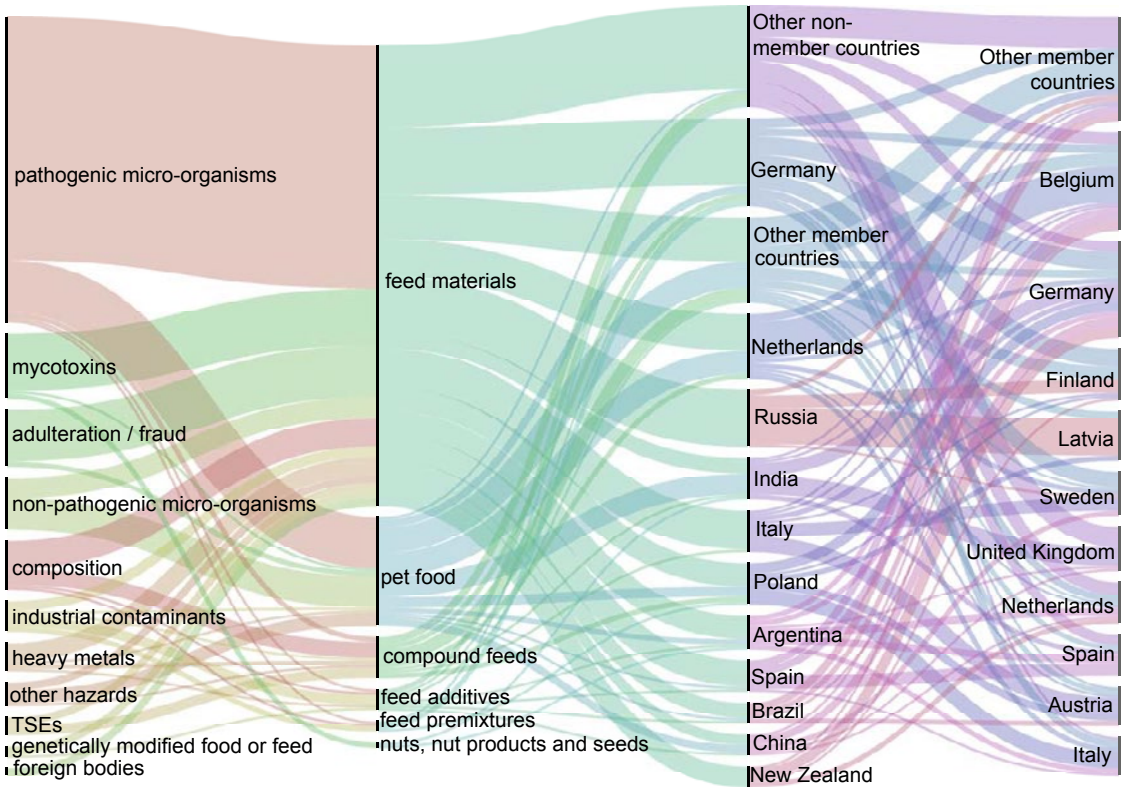
- Too high content of sulphite in dried apricots from Turkey: 36 notifications (all but two of which are border rejections)
- Too high content of sulphite in frozen shrimps from Venezuela: 5 border rejections involving the same producer.

2017 top 10 feed hazard and product categories

239 notifications

The notifications regarding feed take about 6% of the total volume of RASFF notifications and although their number has increased by 30 compared to 2016, their relative share has dropped by one percent.

Hazard categories for feed notifications in 2017 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

Out of 118 notifications, no less than 112 concern *Salmonella*, in different types of feed materials but also in pet food. Especially in dog chews, this is considered a serious health risk, not so much for the dog itself but for a child which may be contaminated from a dog chew lying around the house.

Mycotoxins

The notifications on mycotoxins all but one concern aflatoxins, reported mostly in groundnuts of various origin.

Adulteration/fraud

This category scores particularly high this year because of the issue found of a potential adulteration of fodder yeast from Russia with urea. In the 15 notifications transmitted, Latvia identified a content of urea that was not declared on the label or product specification. Elevated urea intake can be toxic for ruminants. The urea addition may have been made to increase the nitrogen content of the yeast to make it seem to contain more protein, so it can be sold at a higher price.

Non-pathogenic organisms

Out of the 20 notifications reported, 18 concerned a too high count of Enterobacteriaceae, of which 8 on raw (animal origin) pet food. The pet food is consumed without having been cooked and needs to respect a limit of 5000 CFU/g of Enterobacteriaceae.

Composition

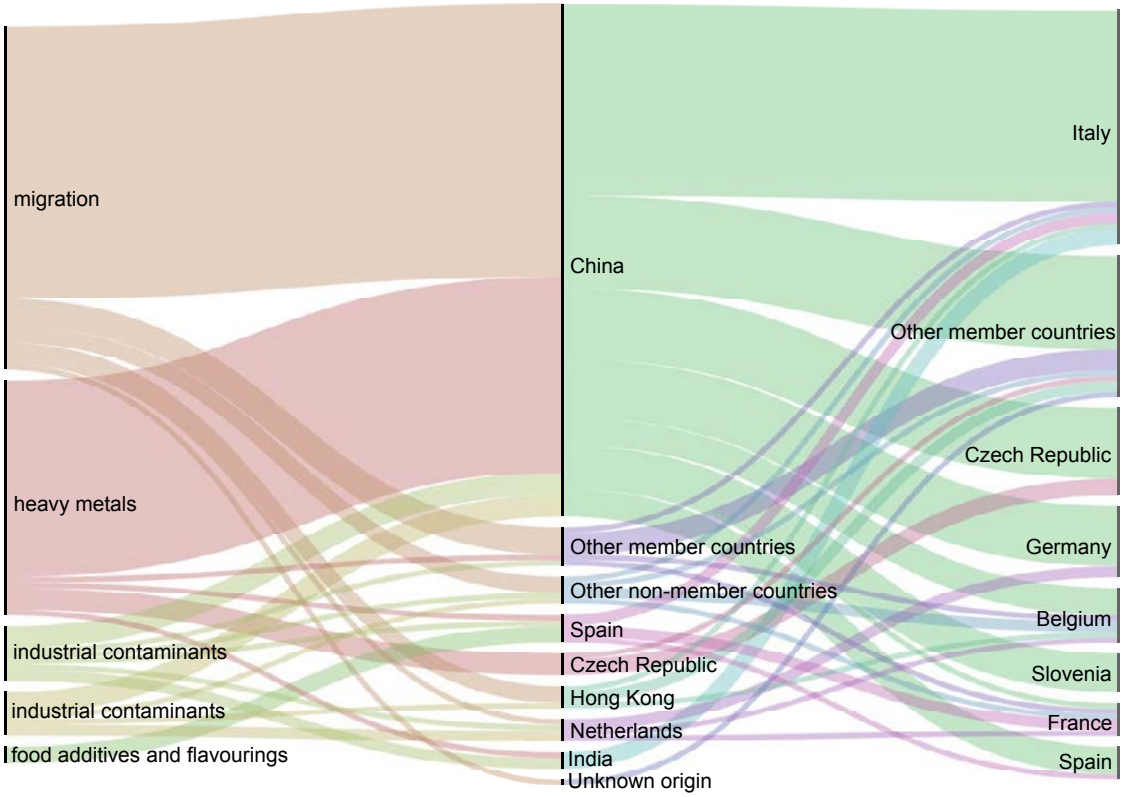
The most reported issue (11 notifications) concerned the presence of ragweed in feed (often bird feed). As explained in earlier annual reports, this is considered a serious risk as the environmental spread of the ragweed can be detrimental to persons allergic to its pollen.

Industrial contaminants

Some 12 notifications were reported on levels of dioxins exceeding the EU limit. Only four concerned feed materials, with levels found not far exceeding the legal limit. Also the levels reported in the notifications related to feed additives, premixes and compound feed were not alarmingly high.

2017 top 10 food contact material hazard categories, set out against country of origin set out against notifying country

118 notifications



The final Sankey diagram of the report demonstrates that food contact material issues are still dominated by products originating from China, which likely reflects the market situation as well. Over the last years, the number of notifications on food contact materials continues to decline, representing 3.1% of all notifications in 2017.

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 measuring 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 2017:

food contact material	compounds migrating	notifications in 2017
melamine	formaldehyde, melamine	29
nylon	primary aromatic hydrocarbons	13
metal	chromium, nickel, manganese, iron, lead, cadmium	29
ceramics, decorated glass	lead, cadmium, cobalt	14
silicone	volatile organic compounds	5
lids of jars, plastic objects	plasticizers	5

Heavy metals

The heavy metals issue is usually one of migration. This was the case for all 43 notifications. It concerned therefore the metal and ceramic objects mentioned in the above table.

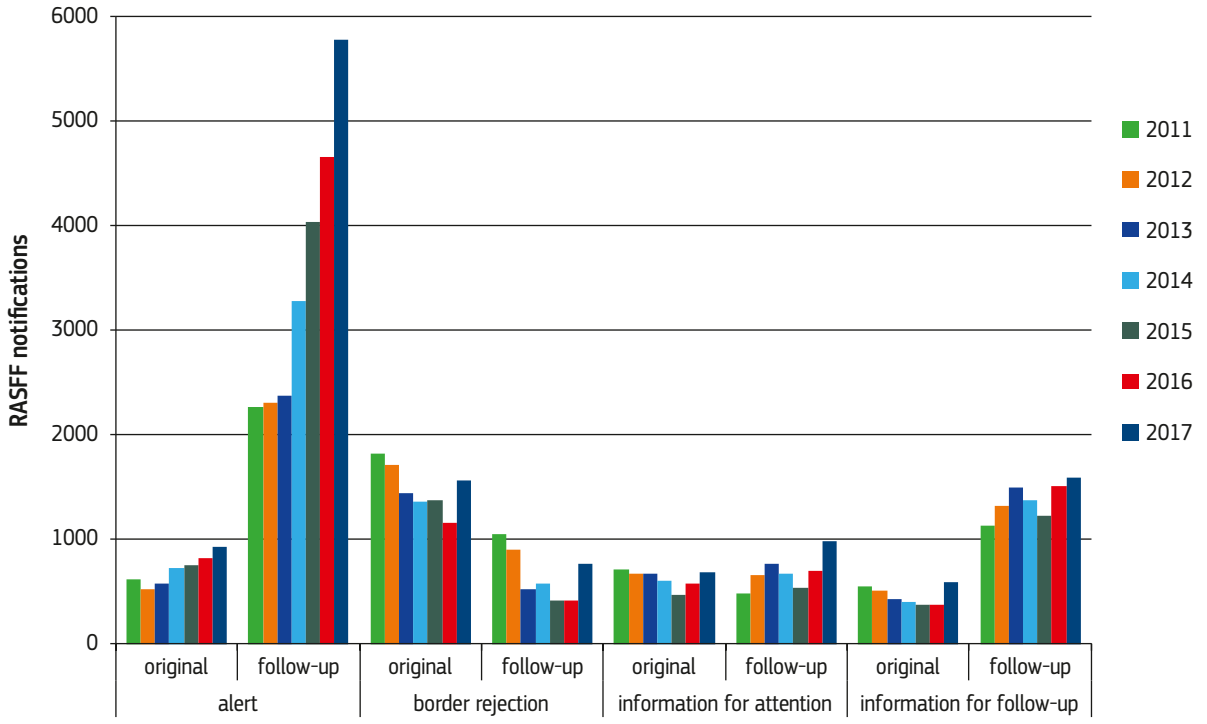
3 More facts and figures

Evolution of the number of notifications

- by notification classification

Original notifications and follow-up

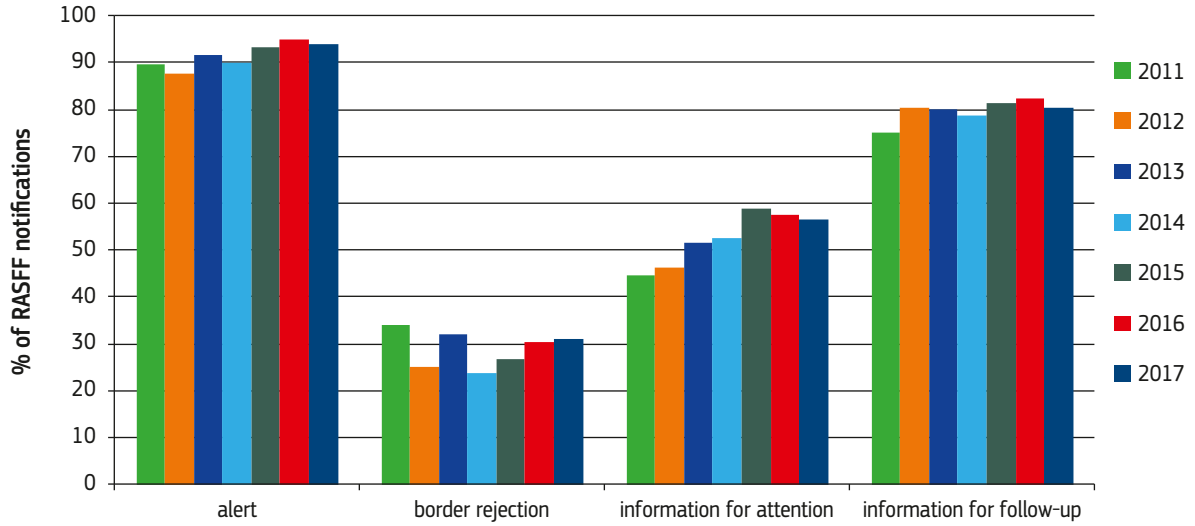
year	alert		border rejection		information for attention		information for follow-up	
	original	follow-up	original	follow-up	original	follow-up	original	follow-up
2011	617	2265	1820	1053	720	480	550	1126
2012	522	2312	1712	906	679	664	507	1325
2013	584	2376	1438	525	679	763	429	1493
2014	725	3280	1357	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



The chart shows clearly that the growth trend in RASFF is very particularly occurring in alert notifications and especially in follow-ups to alerts. However in 2017 we can observe a growth of notifications in all notification classes, both for original as for follow-up types of notifications, which resulted in the substantial overall growth of 26%, as reported earlier.

The chart below shows original notifications with follow-up. These are original notifications to which at least one follow-up was given.

Original notifications with follow-up



The chart shows that, although the number of follow-ups as a whole significantly rose in 2017, there are still quite some notifications that were not followed up at all. Especially in the alert category the objective is to reach 100%. Unfortunately 2017 has not brought further improvement in that respect!

- by notifying country

Original notifications

Evolution of original notifications by notifying country

country	*2009*	*2010*	*2011*	*2012*	*2013*	*2014*	*2015*	*2016*	*2017*
Austria	110	88	65	49	46	46	56	46	48
Belgium	117	94	128	143	164	198	179	129	200
Bulgaria	26	33	116	75	54	87	99	92	109
Commission Services	22	12	4	1	1			1	2
Croatia					8	11	20	28	50
Cyprus	53	52	76	46	44	55	39	29	41
Czech Republic	68	90	96	71	70	70	56	79	79
Denmark	122	131	151	130	112	99	94	80	130
Estonia	13	18	9	17	32	12	17	15	28
Finland	141	130	111	105	88	98	55	57	65
France	157	171	199	275	249	266	235	194	254
Germany	412	396	416	362	331	330	275	369	385
Greece	160	157	128	65	65	60	64	57	88
Hungary	10	20	13	10	3	15	9	20	29
Iceland	1	2	6	3	1	1	4	1	1
Ireland	30	33	49	53	40	42	57	31	68
Italy	466	541	544	515	528	503	506	412	551
Latvia	14	21	17	26	27	20	42	28	32
Lithuania	33	48	39	51	28	36	30	42	37
Luxembourg	16	23	25	8	17	12	13	13	7
Malta	18	12	27	11	12	8	13	15	39
Netherlands	212	214	202	173	264	252	258	287	491
Norway	30	23	51	61	45	44	31	65	36
Poland	141	140	225	180	120	132	90	74	87
Portugal	8	18	22	28	40	38	30	33	30
Romania	18	25	21	14	14	17	23	16	19
Slovakia	52	56	35	35	35	38	34	40	50
Slovenia	73	56	45	43	34	30	39	32	31
Spain	255	285	300	239	200	189	174	146	239
Sweden	60	73	72	95	91	67	74	94	107
Switzerland	4	7	6	20	40	34	24	47	60
United Kingdom	334	319	509	516	327	279	337	349	373

Follow-up notifications

Evolution of follow-up notifications by notifying member

country	*2009*	*2010*	*2011*	*2012*	*2013*	*2014*	*2015*	*2016*	*2017*	*% change*
Austria	197	71	118	79	80	117	188	202	217	7
Belgium	178	117	158	210	240	297	262	290	459	58
Bulgaria	44	57	56	60	106	147	143	187	166	-11
Commission Services	196	307	346	340	421	424	427	352	412	17
Croatia	1	3		2	15	31	31	66	98	48
Cyprus	57	68	47	76	73	62	78	85	69	-19
Czech Republic	194	185	199	163	210	232	190	230	221	-4
Denmark	118	95	160	131	179	207	198	180	247	37
Estonia	4	17	24	23	46	60	65	75	94	25
European Food Safety Authority						2				
Finland	25	23	19	23	64	97	94	98	92	-6
France	256	556	361	283	242	325	359	453	552	22
Germany	489	452	519	409	376	512	483	597	705	18
Greece	132	113	118	98	66	74	91	87	109	25
Hungary	95	85	103	120	91	143	90	207	154	-26
Iceland	1	1	5			4	6	12	15	25
Ireland	27	43	60	72	154	130	115	143	183	28
Italy	413	520	654	486	439	433	587	693	940	36
Latvia	30	32	40	36	43	68	58	64	72	13
Liechtenstein					3		1			
Lithuania	26	51	55	72	69	70	59	89	95	7
Luxembourg	11	15	16	8	30	37	37	48	82	71
Malta	44	43	24	32	43	42	77	96	109	14
Netherlands	149	155	135	180	222	265	364	497	824	66
Norway	41	44	49	58	44	58	67	98	79	-19
Poland	154	154	202	313	415	420	343	412	385	-7
Portugal	28	42	25	74	85	109	138	96	130	35
Romania	40	48	63	85	76	137	127	123	125	2
Slovakia	44	68	69	76	59	70	74	86	76	-12
Slovenia	93	42	47	86	44	68	76	100	116	16
Spain	999	1288	1077	1058	706	719	648	733	943	29
Sweden	60	83	84	95	161	155	201	211	214	1
Switzerland	51	70	62	87	85	105	138	176	188	7
United Kingdom	168	125	152	182	141	109	219	382	455	19

2017 notifications by hazard category and by classification

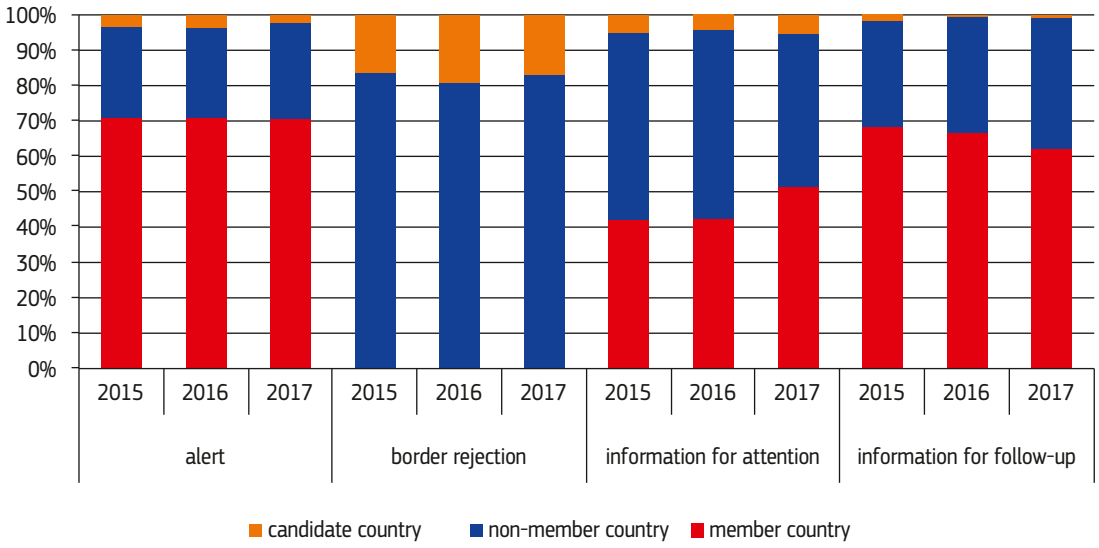
hazard category	*Alert*	*border rejection*	*information for attention*	*information for follow-up*
adulteration / fraud		162	16	6
allergens	116	5	20	3
biocontaminants	34	3	21	2
biotoxins (other)	12	1	3	2
chemical contamination (other)				
composition	74	9	18	60
feed additives				
food additives and flavourings	22	73	29	55
foreign bodies	77	14	14	26
genetically modified food or feed	1	10	4	1
heavy metals	118	57	88	21
industrial contaminants	38	13	8	11
labelling absent/incomplete/incorrect	11	3	7	7
migration	16	21	9	19
mycotoxins	70	464	45	2
non-pathogenic micro-organisms	5	25	7	22
not determined / other	6	2	1	
novel food	5	1	36	136
organoleptic aspects		20	1	10
packaging defective / incorrect	7	14	1	9
parasitic infestation	1	3	11	26
pathogenic micro-organisms	300	452	198	123
pesticide residues	30	133	131	44
poor or insufficient controls	3	96	9	7
radiation		6	4	1
residues of veterinary medicinal products	18	23	15	10
TSEs			3	5

2017 notifications by product category and by classification

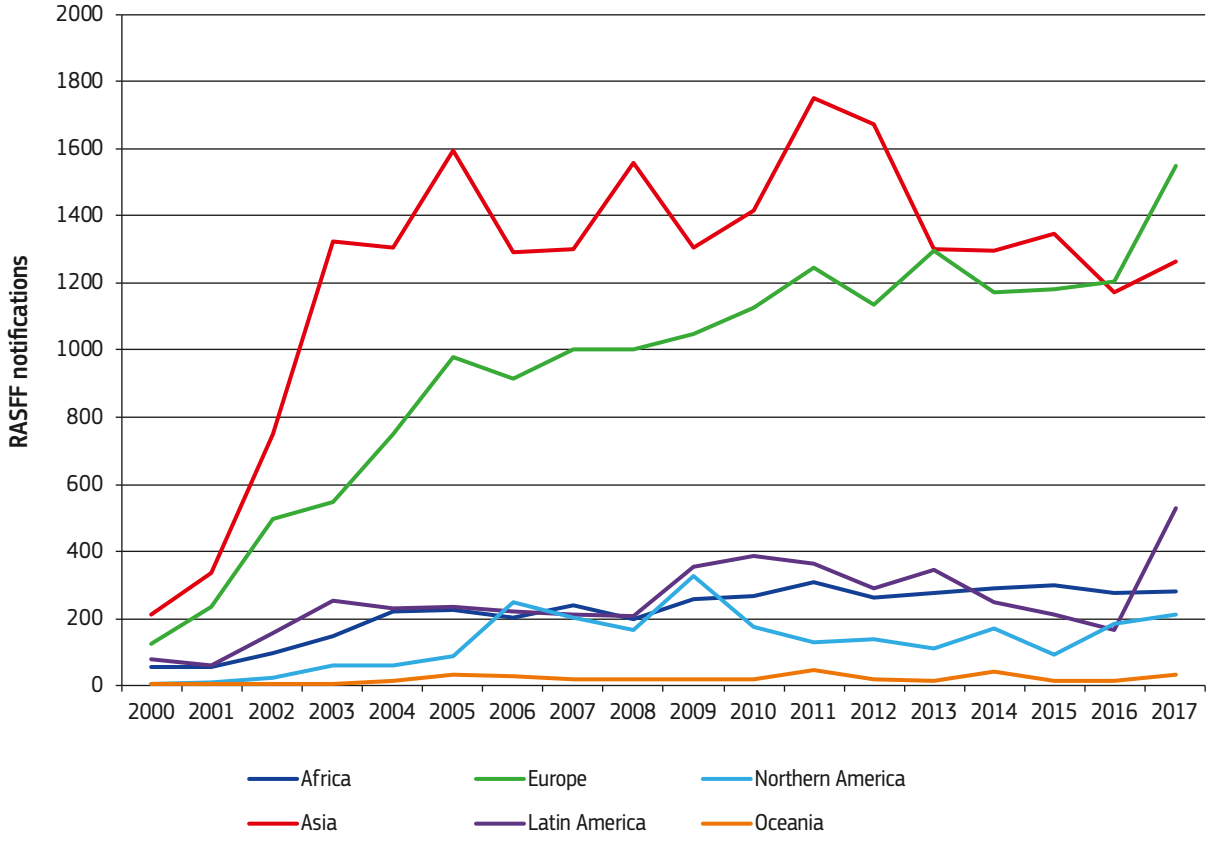
product category	*alert*	*border rejection*	*information for attention*	*information for follow-up*
alcoholic beverages	3		2	1
animal by-products		3		1
bivalve molluscs and products thereof	33	5	30	4
cephalopods and products thereof	9	27	22	
cereals and bakery products	51	39	21	14
cocoa and cocoa preparations, coffee and tea	16	14		6
compound feeds	7		4	5
confectionery	25	17	5	8
crustaceans and products thereof	8	60	19	17
dietetic foods, food supplements, fortified foods	76	9	51	178
eggs and egg products	11		79	37
fats and oils	10	5	1	5
feed additives	1	1	3	3
feed materials	10	36	25	99
feed premixtures	1		1	2
fish and fish products	135	82	117	36
food additives and flavourings	3	1		2
food contact materials	34	45	14	26
fruits and vegetables	86	285	101	34
herbs and spices	33	79	29	5
honey and royal jelly	1	1	1	
ices and desserts	7		1	1
meat and meat products (other than poultry)	78	39	38	29
milk and milk products	43		12	7
natural mineral water	1			1
non-alcoholic beverages	5	7		4
nuts, nut products and seeds	59	451	21	5
other food product / mixed	21	11	6	4
pet food	11	9	4	11
poultry meat and poultry meat products	96	330	61	19
prepared dishes and snacks	35	2	14	9
soups, broths, sauces and condiments	18	12	1	12
water for human consumption (other)				1

Notifications – country of origin

2015-2017 notifications by country type (origin)



2000-2017 notifications by world region



4 Annex: in case you want more data

2015-2017 notifications by country of origin

country	2015	2016	2017
Afghanistan	6	2	
Albania	4		4
Algeria	3		11
Andorra		1	
Argentina	23	35	56
Australia	9	5	10
Austria	21	17	13
Azerbaijan	1	6	17
Bangladesh	6	9	9
Belarus	25		1
Belgium	59	54	92
Belize	2		1
Benin	1	4	2
Bolivia	5	6	13
Bosnia and Herzegovina	3	4	10
Brazil	91	56	372
Brunei			1
Bulgaria	8	11	10
Burkina Faso		1	2
Cambodia	6	3	3
Cameroon	2	2	1
Canada	7	7	19
Cape Verde	2	3	4
Chile	14	11	14
China	394	255	303
Colombia	4	5	4
Costa Rica		2	2
Côte d'Ivoire	1	1	3
Croatia	9	7	4
Curaçao	1		
Cyprus	1	1	1
Czech Republic	22	30	24
Denmark	27	35	29
Dominican Republic	18	6	7
Ecuador	12	9	17

country	2015	2016	2017
Egypt	78	59	60
El Salvador		2	1
Estonia	4	2	4
Ethiopia	7	12	15
Faeroe Islands		1	
Fiji		1	1
Finland	1	2	1
former Yugoslav Republic of Macedonia	1	3	1
France	120	118	131
French Polynesia	1		
Gambia	9	1	1
Georgia	5	15	9
Germany	117	117	143
Ghana	19	23	12
Greece	12	8	11
Guinea	1	2	1
Honduras	2		
Hong Kong	13	12	7
Hungary	23	24	25
Iceland		4	
India	276	200	225
Indonesia	21	37	23
Iran	61	68	73
Ireland	17	16	22
Israel	2	7	5
Italy	117	106	189
Jamaica	1		
Japan	3	7	2
Jordan	3	1	1
Kazakhstan	2		1
Kenya	18	3	
Kosovo			1
Kuwait	2		
Laos	11	29	4

country	2015	2016	2017
Latvia	15	5	9
Lebanon	4	5	18
Lithuania	11	23	13
Luxembourg	2	2	3
Madagascar	8	9	3
Malawi			1
Malaysia	7	6	5
Maldives	1		1
Mali		1	1
Malta		1	7
Mauritania	15	8	3
Mauritius	4	2	2
Mexico	20	5	5
Moldova	1	3	
Montenegro		1	
Morocco	28	34	25
Mozambique	2	6	
Myanmar		1	1
Namibia	6	8	8
Nepal	1	1	
Netherlands	94	112	148
New Zealand	5	8	13
Nicaragua	3	4	2
Niger		1	
Nigeria	42	25	47
Norway	8	5	10
Pakistan	17	12	11
Panama	1	7	2
Papua New Guinea	1	2	7
Paraguay	1	1	
Peru	13	12	10
Philippines	12	9	14
Poland	120	135	159
Portugal	23	19	31
Réunion	1		
Romania	19	14	13
Russia	12	17	27

country	2015	2016	2017
Saudi Arabia	1	2	1
Senegal	7	14	12
Serbia	16	15	22
Seychelles	1	5	4
Singapore	1		
Slovakia	8	5	8
Slovenia	2	3	6
Solomon Islands			1
South Africa	22	23	9
South Korea	16	9	10
Spain	158	175	232
Sri Lanka	17	15	17
Sudan	1		20
Suriname	1	1	1
Swaziland			1
Sweden	25	18	19
Switzerland	3	6	8
Syria	1	4	9
Taiwan	9	8	3
Tanzania		1	1
Thailand	70	86	84
Togo	1		2
Tunisia	21	18	24
Turkey	281	274	316
Uganda		10	5
Ukraine	20	20	11
United Arab Emirates	3		2
United Kingdom	55	65	110
United States	87	178	195
unknown origin	8	9	55
Uruguay		4	12
Uzbekistan	6	21	6
Venezuela	1	1	9
Vietnam	85	67	80
Yemen	1		1
Zimbabwe		2	1

2017 notifications by hazard category and notifying country

hazard category	AT	BE	BG	CH	CS	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	2	2				2	1		1		17		6	**105**	3		4	2	1	5			16	1	1	5	7	2		1		
allergens		9		1	1	1	2	14	11		6	1	1	**35**			1	9		8				4	27					7		6
biocontaminants		5					1	6	2		1		5	1	4	1				**26**					3		1	1		2	1	
biotoxins (other)		**5**						1	1				2					3		4						1				1		
composition		5		1		2	2	**27**	7		13	2	15	7		1	2	8	1	4	12	1		1	14	8	6	1		15	2	4
food additives and flavourings			10	6		4	6	8	8		**27**	3	12	16	6	5		6		16	4		7	9	2		1	1		16	2	4
foreign bodies	4	5		3			7	**25**	21	1	2	1	8	10		1	1	1		15	1		1		12	2	5	1		3		1
genetically modified food or feed			1					1			3		2	**4**						4						1						
heavy metals	1	8		5		1	8	11	3	1	9	3	34	2	7	2	2			150	4		1	1	22		4	2		2		1
industrial contaminants	3	12						**13**	1	1	2	1	1	1	1	**13**		2		2					9		1				3	4
labelling absent/incomplete/incorrect		3						4	2		1			4	1					**6**	1	1		2	1			2				
migration	2	6				3	10	6	2		4		1			1		4		**15**			1		1		1				7	1
mycotoxins	4	25	15	16		7	5	96	24		50	3	44	49	16	1		7		57	3	2	1	3	**105**		17	11	4	6	5	5
non-pathogenic micro-organisms	2	**11**		1		2		1	7		4	3	1	2	3	1	3	1		5					4		5	1		2		
not determined / other								**4**	1		1			2												1						
novel food	13	10		15		10	2	3	7	6	10	1	15	1		7	2	12			5			11	5	3	11			**21**	4	4
organoleptic aspects		2						4	2		2	1	2	4	2					4					**5**		1	1				1
packaging defective / incorrect		1				2		4	3				4	**9**						1					7							
parasitic infestation							1		1	3	2		5							**24**	1								2		1	1
pathogenic micro-organisms	15	65	3	5	1	3	20	151	23	15	31	36	90	95	37	14	11	18		112	5	2	2	1	**229**	13	16	6	8	31	5	10
pesticide residues	4	11	77	7		6	12	11	3	1	7	12	4	6	7	5	5			**85**	1	1	1	7	31	2	13		4	8		7
poor or insufficient controls	1								3		**56**		2	23	3					12					7		1	4		2		1
radiation								1			1		1							**6**			1						1			
residues of veterinary medicinal products		**20**	1	2			1	8	2		3		4	5						6			1		10	1	2					
TSEs			**2**									1	1	1	1								1				1					

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

2017 notifications by product category and notifying country

product category	AT	BE	BG	CH	CS	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		1						1		1			1	1											1							
animal by-products		1						1			1														1							
bivalve molluscs and products thereof		4						1	1		3		14	8				4		29					5	1		1			1	
cephalopods and products thereof		1		3				4			20		2	1	7	1				15					1			3				
cereals and bakery products		4		12		2	5	10	9	1	3	3	5	11		9	2	3		23				1	8	2	2			4	3	3
cocoa and cocoa preparations, coffee and tea	2	2		1			3	3	1		5	1	3	1				1		1				1	3		4			4		
compound feeds		3	2					4	1				2		1								1		1						1	
confectionery	1						1	8	4				2	17	1	5		3		1	5			3	2	1				1		
crustaceans and products thereof		10				1		7	4		20	2	12	7	3	5		1		19					11	1		1				
dietetic foods, food supplements, fortified foods	15	15		15		12	5	13	17	6	17	5	29	10		6	5	15		4	16	2	2	11	21	10	18	1	1	30	5	8
eggs and egg products	2	2	2				4	6	2				2		2		4		1	70		2		7	4	2	7			1		7
fats and oils		3						3	2		1			2						1					5						3	1
feed additives		1									2				1					1	1				1					1		
feed materials	9	21	1	1			1	21	3		11	17	5	14		1	4	1		12	1	1	16		9		2	4		14	1	
feed premixtures								1																	2				1			
fish and fish products		9		5		2	3	10	2	4	41		38	24	6	1	1			173	2		2	1	33	1	2	4	2	1	1	2
food additives and flavourings											1			4						1												
food contact materials	3	10				3	16	12	3		5	3	4			2		3		39	3		1		1		3				7	1
fruits and vegetables	3	13	84	7	1	8	20	51	39	1	27	16	34	55	8	5	2	3		27	2		5	9	33	4	12	3	4	19	2	9
herbs and spices	1	1	1	6		4		14	4		13	7	6	41	4			5		3				1	19	8	5			2		1
honey and royal jelly						1					1																1					
ices and desserts	1						2	1								1	1								3							
meat and meat products (other than poultry)	3	22	1	2			4	15	9	6	5		13	9		1	2	1		30	1		1		31	2	2	2		14	1	7
milk and milk products	1	3						13	4				18	1		3		3		6					7		1				2	
natural mineral water								1												1												
non-alcoholic beverages				1				2	1		2			5										1	3			1				
nuts, nut products and seeds	3	25	14	2	1	8	1	77	2	1	46	4	27	65	54	1		5		50	2	1	2	1	95	3	24	8	4	5	1	4
other food product / mixed		4	1					8	1	2	1		1	8				1		6				1	5		1	1		1		
pet food	3	9						10			1	2		1	1					2			1		2	1				2		
poultry meat and poultry meat products	1	31	3				13	76	14	5	8	5	29	70		9	6	10		28	4	1		1	170		1		7	4	3	7
prepared dishes and snacks		4		5				7	5	1	1		6	13			1	1		1			1		10					4		
soups, broths, sauces and condiments		1					1	5	2		4		1	5			1	8		7				1	4		2	1				
water for human consumption (other)																				1												

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

2017 notifications by product category and type of control

product category	border	market	%border	%market
alcoholic beverages		6	0	**100**
animal by-products	4		**100**	0
bivalve molluscs and products thereof	5	67	7	**93**
cephalopods and products thereof	42	16	**72**	28
cereals and bakery products	29	95	23	**77**
cocoa and cocoa preparations, coffee and tea	13	23	36	64
compound feeds	3	13	19	**81**
confectionery	16	39	29	**71**
crustaceans and products thereof	73	31	**70**	30
dietetic foods, food supplements, fortified foods	11	302	4	**96**
eggs and egg products	1	126	1	**99**
fats and oils	5	16	24	**76**
feed additives	2	6	25	**75**
feed materials	57	113	34	**66**
feed premixtures		4	0	**100**
fish and fish products	103	265	28	**72**
food additives and flavourings	1	5	17	**83**
food contact materials	33	86	28	**72**
fruits and vegetables	288	216	57	43
herbs and spices	88	58	60	40
honey and royal jelly	3		**100**	0
ices and desserts		9	0	**100**
meat and meat products (other than poultry)	53	131	29	**71**
milk and milk products	1	61	2	**98**
natural mineral water		2	0	**100**
non-alcoholic beverages	7	9	44	56
nuts, nut products and seeds	424	112	**79**	21
other food product / mixed	9	33	21	**79**
pet food	10	25	29	**71**
poultry meat and poultry meat products	345	161	**68**	32
prepared dishes and snacks	3	56	5	**95**
soups, broths, sauces and condiments	12	31	28	**72**
water for human consumption (other)		1	0	**100**

2017 non-member countries having provided follow-up

country	distr	orig	other	follow-ups	%reaction
Afghanistan	2		1		0
Albania	6	4		9	90
Algeria	1	11			0
Andorra	17		1	8	44
Angola	3				0
Argentina	1	59	1	7	11
Armenia	3				0
Aruba	2				0
Australia	11	10		7	33
Austria	2				0
Azerbaijan	1	17			0
Bahamas	1				0
Bahrain	2				0
Bangladesh	2	9			0
Belarus	5	1			0
Belize		1	1		0
Benin	1	2			0
Bolivia		13			0
Bosnia and Herzegovina	11	10	1	22	100
Brazil	1	378		78	21
Brunei	1	1		1	50
Burkina Faso	1	2			0
Burundi	1				0
Cambodia	1	3		2	50
Cameroon	3	2			0
Canada	10	20	2	2	6
Cape Verde	1	4			0
Central African Republic	1				0
Chad	1				0
Chile	2	14		11	69
China	10	307	6	3	1
Colombia		4	1	4	80
Comoros	1				0
Congo (Brazzaville)	4				0
Costa Rica		2		2	100
Côte d'Ivoire	3	4			0
Curaçao	2				0
Democratic Republic of the Congo	1				0
Dominican Republic	1	7			0
Ecuador		18		7	39
Egypt		61	2		0
El Salvador		1			0
Equatorial Guinea	2				0
Ethiopia		13			0
Faeroe Islands	10			4	40
Fiji		1			0
former Yugoslav Republic of Macedonia	4	1	1	4	67
French Polynesia			1	3	300
Gabon	3				0
Gambia	1	1			0
Georgia	4	9	2	21	140

country	distr	orig	other	follow-ups	%reaction
Ghana	4	12	2	3	17
Gibraltar	5			4	80
Greenland	11				0
Guadeloupe	1				0
Guernsey	5				0
Guinea	2	1			0
Haiti	2				0
Hong Kong	24	7	13	45	102
India	2	229		164	71
Indonesia	1	24		8	32
INFOSAN	0		613		0
Iran	2	73		1	1
Iraq	2				0
Isle of Man	1		1	1	50
Israel	8	5		2	15
Japan	2	2			0
Jersey	3		1		0
Jordan	1	1			0
Kazakhstan		1			0
Kenya	1				0
Kosovo	1	1			0
Kuwait	2				0
Laos		4			0
Lebanon	5	18	2	13	52
Liberia	1		1	1	50
Macao	1				0
Madagascar	1	3			0
Malawi		1			0
Malaysia	7	5			0
Maldives	1	1			0
Mali	1	1			0
Mauritania	1	3			0
Mauritius	4	3		2	29
Mexico	2	5		1	14
Moldova	7				0
Monaco	9		6		0
Montenegro	6		1		0
Morocco	8	25		5	15
Myanmar		1		1	100
Namibia		8			0
New Caledonia	1			1	100
New Zealand	5	13	2	3	15
Nicaragua	1	2			0
Niger	1				0
Nigeria	1	47			0
Pakistan	4	11	1		0
Panama	2	2		1	25
Papua New Guinea		7		9	129
Paraguay	1				0
Peru	1	11		1	8
Philippines	3	14		4	24
Qatar	4				0
Russia	10	27	2		0
Rwanda	1				0

country	distr	orig	other	follow-ups	%reaction
San Marino	16		1	13	76
Saudi Arabia	4	1			0
Senegal	3	12			0
Serbia	11	22		2	6
Seychelles	2	4			0
Sierra Leone	1				0
Singapore	10		1		0
South Africa	9	12		6	29
South Korea	3	10			0
Sri Lanka		17		3	18
Sudan	1	20			0
Suriname		1			0
Swaziland		1			0
Syria	1	9			0
Taiwan	4	3		1	14
Tanzania		1			0
Thailand	7	87		37	39
Togo	1	2		1	33
Tunisia	2	25	1		0
Turkey	7	318	13	8	2
Uganda		5		4	80
Ukraine	20	11	2	27	82
United Arab Emirates	16	2	13	1	3
United States	22	198	10	22	10
Uruguay	1	12			0
Uzbekistan	1	6			0
Venezuela		9			0
Vietnam	8	83	4	4	4
Yemen	1	1			0
Zambia	1				0
Zimbabwe		1			0
total:	**464**	**2431**	**707**	**594**	

The first column “distr” shows the number of 2017 notifications for each country to which the Commission’s Services notified distribution of a product. The second column “orig” shows the number of 2017 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 2017.

2017 notifications by hazard category and risk decision

hazard category	undecided	serious	not serious
adulteration / fraud	2	4	178
allergens	5	138	1
biocontaminants	1	57	2
biotoxins (other)	1	16	1
chemical contamination (other)	0		
composition	52	82	27
feed additives	0		
food additives and flavourings	17	37	125
foreign bodies	10	86	35
genetically modified food or feed	15	1	
heavy metals	29	240	15
industrial contaminants	6	38	26
labelling absent/incomplete/incorrect	3	16	9
migration	15	20	30
mycotoxins	3	577	1
non-pathogenic micro-organisms	8	5	46
not determined / other	3	6	
novel food	167	6	5
organoleptic aspects	8		23
packaging defective / incorrect	8	9	14
parasitic infestation	1	1	39
pathogenic micro-organisms	55	845	173
pesticide residues	51	172	115
poor or insufficient controls	12	4	99
radiation	1	2	8
residues of veterinary medicinal products	20	37	9
TSEs			8

Categories coloured red have predominantly notifications 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”.

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