



Original thinking... applied

GLOBAL FOOD INTEGRITY
ISSUES AND EMERGING RISKS

—
April — June 2017

A large, stylized graphic consisting of several overlapping, curved, and swirling shapes in shades of gray and white, positioned behind the main title.

HOT
SOURCE.





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Dear Reader

How safe is your food? When they expect the world.

We live in an ever-changing world with new trends and themes impacting the daily life of the average consumer. The food industry is on a constant battle to keep up with these high demands of the modern shopper to managing a very complex and global supply chain. You could say that we are almost the victims of our own success in catering for every niche market to subscribing to the latest trend, or even being the catalyst for it. For some time now, it is a well-known fact that more than half of British people have given up the traditional “big shop”, and are making more frequent visit to local stores, as research has shown. There is a clear shift towards speed and convenience driving a change in consumer behaviour to the sharp increase in ‘touch and go’ we’re seeing in the supermarket sector. Added to this seismic shift are waves of new trends like the movement toward plant-based products, regardless of ingredient source, being driven by two big trends in the food space: protein demand and clean eating. It has been seen that the younger consumers, especially millennials, are looking for an alternative for red meat, but they don’t want to give up protein. Plant-based products are in high demand because they satisfy consumer desire for “clean,” natural products with recognisable ingredients and functional benefits.

Just noting the number of vegans has increased substantially by 350% over the past decade, whilst Google searches for the word ‘vegan’ rose by 90% from 2016 to 2017, with the flipside of this being in recent years, meat consumption has marginally decreased by 11% over the past 2 decades as of August 2017, forcing global businesses to amend their strategies.

Fortunately for consumers, scientists and ingredient manufacturers have been working to find alternatives to meat that create satisfying, protein-filled foods. A wide variety of protein sources are being used as ingredients, such as rice, peas, potato, pumpkin, black bean, algae, chia, hemp, egg and soy to name just a few. This widening and combining of raw materials with others, increases the burden of transparency needed to ensure that every new opportunity is greeted with success.

With all this change and constant challenge to meet consumer demands, improving supply chain transparency is a high priority for companies, especially in industries such as the food and beverage industry where consumers and regulators are pushing for more information on how products are made. Incorporating software technology like HorizonScan into our armoury, can ensure effective supply chain visibility together with aiding a well-developed traceability strategy allowing you, as an organisation to see where each ingredient came from with any increasing or emerging issues associated with it. This end-to-end visibility is the key to resilient supply chains and becomes especially important when facing disruptions in the supply chain or crisis situations such as recalls, like the very current fipronil issue. This allows you as an organisations to significantly reduce supply chain risk by enabling the company to either take action to prevent disasters or to respond to disruption by activating backup plans.

“Google searches for the word ‘vegan’ rose by 90% from 2016 to 2017, with the flipside of this being in recent years, meat consumption has marginally decreased by 11% over the past 2 decades as of August 2017, forcing global businesses to amend their strategies.”

The key to mitigating food supply chain risk

Supply chain visibility helps to reduce supply chain risk in many ways:

- **Compliance with regulations:** Ability to meet food safety and food security requirements as well as import and environment regulations.
- **React to disruptions:** Real-time alerts and information enable supply chain leaders to proactively address disruptions
- **Ensure consumer safety:** Unbroken data streams help to mitigate foodborne illnesses improving brand and corporate reputation.
- **Reduced recalls:** Continuous data on supply chain integrity enables organisations to prevent, rather than react to recalls.
- **Mitigate supply shortages:** Continuous data flow enables supply chain managers to build resilient supply chains.
- **Reduced food waste:** Knowing what happens throughout the supply chain helps to reduce food waste.



From farm to consumer

Find the right solution to get the right answer every time, when you need it, from contaminations to fraud.



Technology:
HorizonScan
Daily Alerts

Software:
HorizonScan

Support



HORIZONSCAN HIGHLIGHTS: 2017 Q2 Roundup

Emerging issues:

- An emerging issue has been picked up by HorizonScan for undeclared egg in coconut rolls originating from Thailand. So far recalls have been received from Canada, New Zealand and Australia.
- Despite concerns over arsenic levels in rice leading to EU regulations setting a limit of 0.2 µg/kg (inorganic arsenic) in 2015, until now HorizonScan has never previously encountered a recall resulting from this contaminant in rice for human consumption. However, a company has recently recalled organic rice from Italy found to contain 0.31 mg/kg arsenic following a notification by the Czech Republic.
- 1,500 lbs of whole, young chicken (eviscerated) have been recalled in the USA after government testing found them to contain veterinary drug residues (nitrofurazone). This is also an emerging issue, being the first time that chickens from the USA containing drug residues have appeared in HorizonScan.
- An emerging issue has been picked up by HorizonScan concerning trout from Colombia being contaminated with vet drugs, specifically malachite green.
- Microbiological contamination of fresh produce is emerging as a major global food safety issue according to a recent paper published by Prof Ravi Gooneratne and Dr Malik Hussain in New Zealand. It is suggested that this is due to the push for healthy eating as well as people failing to store fresh produce appropriately and not washing fruit and vegetables before eating them.
- An emerging issue has been picked up by HorizonScan. Norway has reported bags of dried soya beans, imported from Thailand, which were found to contain at least 60% illegal genetically modified beans. This is the first time this commodity, contaminant and exporting country has been encountered in HorizonScan.
- A HorizonScan highlight dated the 3rd of April 2017 originally flagged up a Salmonella outbreak within the EU linked to a completely new serotype (antigenic formula 11:z41:enz15) found in sesame seeds from Nigeria. Following on from this, the new serotype has now also been linked to sesame paste, this time made with seeds from Sudan. The common link between the sesame seeds and sesame paste is that they were processed by the same manufacturer in Greece (as yet unnamed).



An emerging issue has been picked up by HorizonScan concerning trout from Colombia being contaminated with vet drugs, specifically malachite green

HORIZONSCAN HIGHLIGHTS: 2017 Q2 Roundup

Increasing issues:

- The presence of *Salmonella enteritidis* in chicken from Poland continues to be an issue. It was raised as a highlight in HorizonScan in July 2016, and since then reports have continued to be received from several EU countries including Belgium, Lithuania, France, The Netherlands, Finland and Denmark, amongst others. Poland was the second largest exporter of chicken products in to the EU in 2016, having exported 42,904,000kg of chicken. (See figure 1)
- A HorizonScan highlight published in December 2016 described the special controls put in place by the EU for hazelnuts originating from Azerbaijan following an increase in findings of non-compliance. This resulted in the competent authority of the country of origin needing to carry out the necessary controls before export to the Union. However, since then issues involving high levels of aflatoxins in hazelnuts from Azerbaijan have continued to be reported by several countries in the EU, suggesting this is still a problem despite the new controls. (See figure 3)
- An increasing issue has been picked up by HorizonScan concerning the presence of *Vibrio* in crustaceans from India, with RASFF reports having been received from Germany, Norway and the UK. (See figure 2)
- There has been an increase in the number of reports for crustaceans from Ecuador found to contain excessive levels of sulphites, with reports received from Italy and Portugal through the RASFF. (See figure 4)
- There has been an increase in reports of high levels of aflatoxins (mycotoxins) in peanut butter from the USA, with reports received from Cyprus and Japan. (See figure 5)

FIGURE 1

Issue	Date	Notifying Country
<i>Salmonella enterica</i> ser. Enteritidis (presence /25g) in chilled chicken breasts from Poland	14 Jul 2017	Italy
<i>Salmonella enteritidis</i> (presence /25g) in raw chicken breast fillet from Poland	07 Apr 2016	United Kingdom

FIGURE 2

Issue	Date	Notifying Country
<i>Vibrio parahaemolyticus</i> (presence /25g) in frozen raw white tiger shrimps (<i>Litopenaeus vannamei</i>) from India	15 May 2017	Germany
<i>Vibrio cholerae</i> (presence /20g) in frozen shrimps (<i>Penaeus vannamei</i>) from India	10 Nov 2016	Norway

FIGURE 3

Issue	Date	Notifying Country
aflatoxins (B1 = 15.7; Tot. = 18.8 µg/kg - ppb) in shelled hazelnuts from Azerbaijan	18 Apr 2017	Italy
aflatoxins (B1 = 8.1; Tot. = 9.6 µg/kg - ppb) in hazelnuts shelled from Azerbaijan	27 Jan 2017	Bulgaria

FIGURE 4

Issue	Date	Notifying Country
too high content of sulphite (219 mg/kg - ppm) in chilled cooked shrimps (<i>Penaeus vannamei</i>) from Spain with raw material from Ecuador	24 May 2017	Italy
too high content of sulphite (254 mg/kg - ppm) in cooked prawns (<i>Penaeus vannamei</i>) from Ecuador, via Spain	12 Apr 2016	Italy

FIGURE 5

Issue	Date	Notifying Country
Aflatoxins (mycotoxins) detected in peanut butter	05 Jun 2017	Japan
Aflatoxins (mycotoxins) detected (86 µg/kg) in peanut butter	01 Aug 2016	Japan

(Please note that not all the reports concerning these particular issues are displayed in the tables, they are just the first and the last report being encountered over the 12 months period).

Food fraud issues:

- In probably the only major illegal trafficking originating in Europe, police across six countries have smashed two international glass eel smuggling rings with seizures of four tons worth an estimated £3.5M. Exported to China, the European eel is critically endangered and eel fishing and export are strictly regulated. Eel, like all other types of seafood, is at high risk of food fraud, with forged documentation about origin and improper import paperwork the main activities to monitor.
- Importers of mangoes should be aware of artificial and illegal ripening using calcium carbide to ripen them prematurely. The use of calcium carbide in India was banned under Section 44A of the Prevention of Food Adulteration Act. Medical experts say that artificially ripened fruits could pose serious health hazards such as damage to the kidney, liver and cause ulcers and gastric problems.
- Australian olive oil may not be all it seems when a producer has been accused of buying olives and olive oil from Greece, putting his brand on them and then selling it as Australian-grown.
- Italian police probes into production of Parma ham and Prosciutto di San Daniele suggests that their hallowed status of geographical origin is being flouted by using imported high-quality pig sperm from outside Italy to breed leaner swine — in flagrant defiance of EU rules on their protected status, that say the male pigs must be of purely Italian bloodstock.
- Following the worst tropical cyclone to hit north east Madagascar in March 2017, the important vanilla growing areas of Sambava and Antalaha have experienced losses of 80-100% of crop. 140 mph winds knocked pods off the vines and consequently prices are likely to soar and the opportunity for adulteration and substitution is high.
- Following allegations of milk adulteration with formaldehyde to extend shelf life, the Tamil Nadu State government has informed the Madras High Court that a Committee would be constituted to probe into the allegations. Tamil Nadu has previously been the source of milk fraud in 2014 when the Aavin milk co-operative was found to be diluting milk with water between collection and delivery to Chennai for processing.
- The results of Operation Tripoli have been released by the Policia Federal in Brazil. Investigators seized 400kg of shrimp and found they were treated with sodium tripolyphosphate, a forbidden chemical used to retain water and artificially increase product weight.
- Increasing demand for chia in the short term means demand is likely to outstrip supply. Consequently, there is an increased risk of fraudulent representation of whole chia where organic status or country of origin are important. Ground chia is therefore also particularly at risk of adulteration.
- A large amount of adulterated turmeric powder has been seized in Ghaziabad, just 20 km east of New Delhi. Instances of manufacturing substandard, adulterated and unsafe food products are recurrent in Ghaziabad. Inedible colours injurious to health have frequently been added. In the 2016-17 financial year, as many as 568 samples were taken from different vendors, shops and establishments, of which 152 samples failed the quality test. Officials said the majority of the samples were either food products that were found substandard or of other makes, to pass them under labels of popular brands. Importers should be aware of the increased risk when importing from this area of India.
- Over the past 2 years the Brazilian Ministry of Agriculture Livestock and Supply (MAPA) has detected irregularities in 45 oil brands among the 140 collected in the last two years. Of the 333,329 litres analysed, 205,579 litres were found to have defects.
- Results of Operation Opson VI have been released by Interpol. Operation Opson VI, conducted during December 2016 and March 2017, resulted in the seizure of more than 9,800 tonnes and 26.4 million litres of counterfeit and illicit food from 61 countries who took part in the operation. Counterfeit alcohol was the most seized product, followed by meat and seafood.
- According to a report by the European Commission's Joint Research Centre (JRC) more than 14% of tested honey samples have been found to be adulterated.
- Tests on a number of extra virgin olive oils sold in Danish supermarkets claim that, of 35 types sampled, only 6 were actually extra virgin, 15 were ordinary virgin and the remaining 12 of such poor quality as to be classified as unfit for human consumption.



At a Glance

STATISTICS

Global food integrity issues reported on HorizonScan



KEY

'%' relates to the number of issues concerning that commodity in its group, for example 32.9% of all issues concerning nuts, nut products and seeds involved pistachios

'Main issues' reflects the majority of issues reported for that commodity, but does not include every minor issue, for example, most reported issues concerning chicken meat were either the presence of Salmonella, Campylobacter or veterinary drug residues

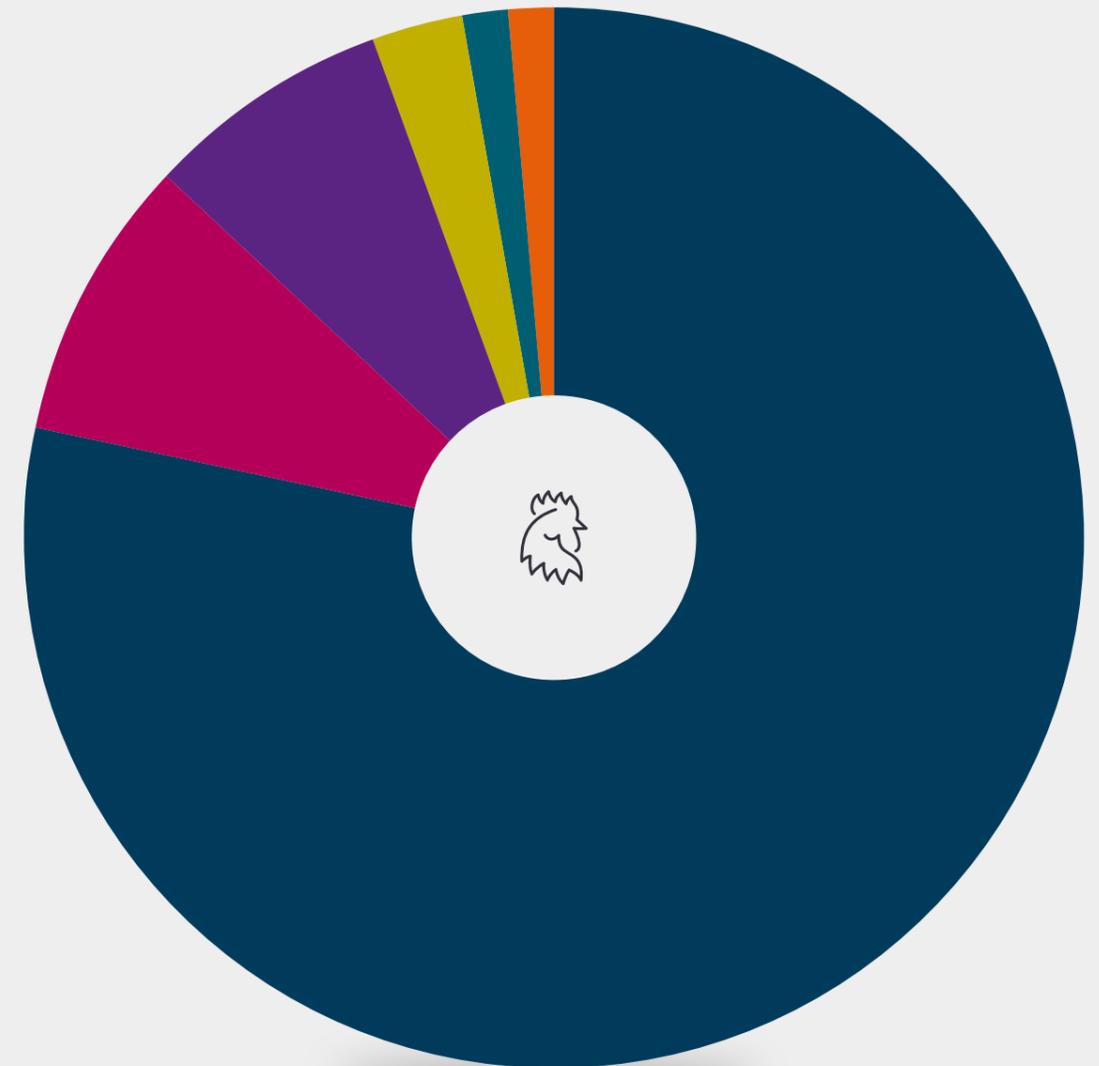
'Issues' relates to food recalls, border rejections and other such notifications at a global level collated from over 100 official government and other additional reliable sources around the world, but excludes FDA import refusals.



STATISTICS

Poultry meat and poultry products

Main issues reported during Q2 2017



Total of 263 issues

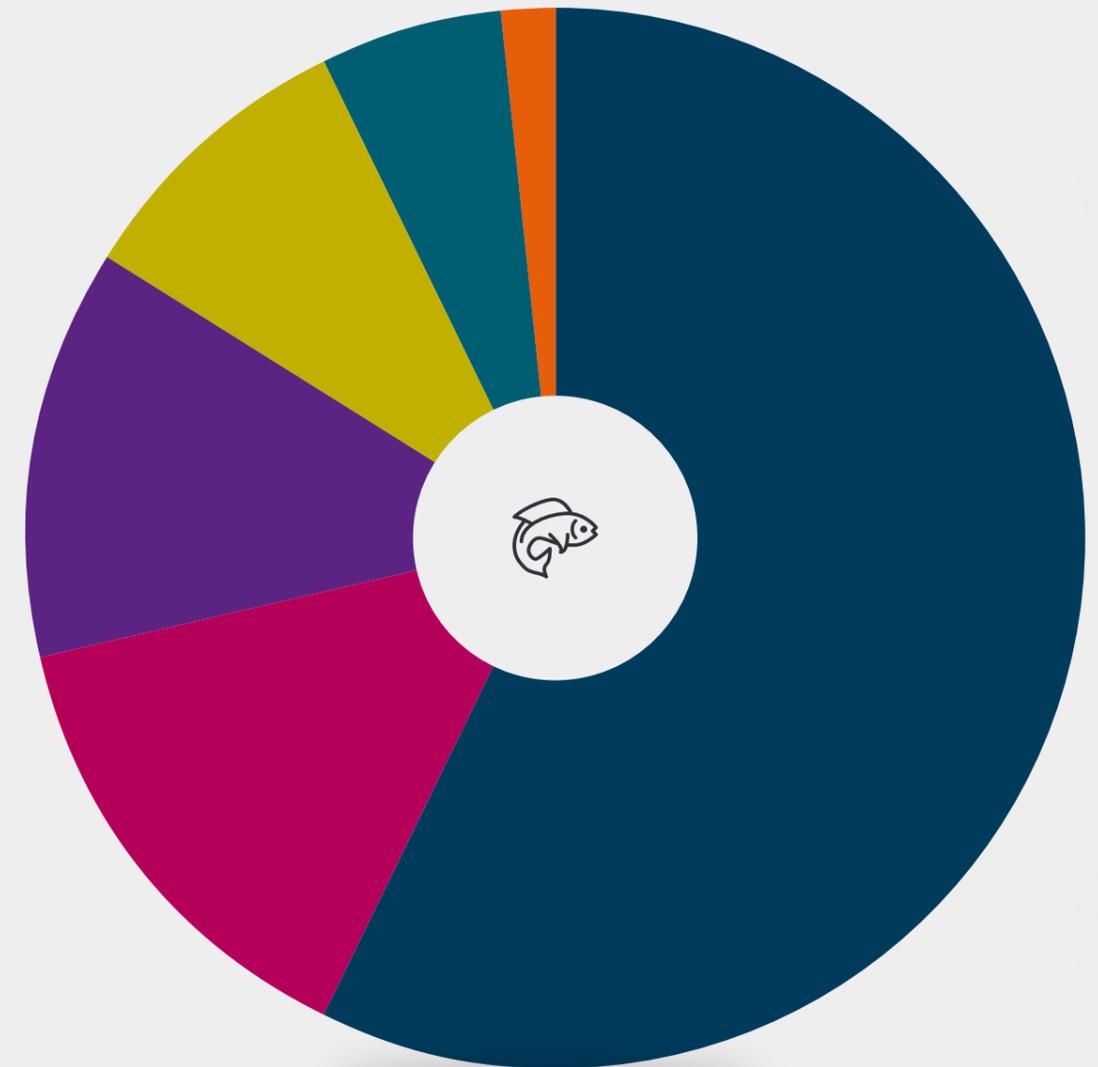
Key	Commodity	%	Main issues
●	Meat - chicken	76.8	<i>Salmonella</i> , <i>Campylobacter</i> or vet. drugs
●	Poultry meat products (pâté etc.)	8.4	Undeclared milk, foreign bodies, <i>Salmonella</i> or mislabelling
●	Meat - turkey	7.2	<i>Salmonella</i>
●	Offal - chicken	2.7	<i>Salmonella</i>
●	Poultry meat products - sausages	1.5	<i>Listeria</i> , foreign bodies, <i>Salmonella</i> or undeclared soya
●	Meat - duck	1.1	<i>Listeria</i> or <i>Salmonella</i>

Poultry products

STATISTICS

Seafood

Main issues reported during Q2 2017



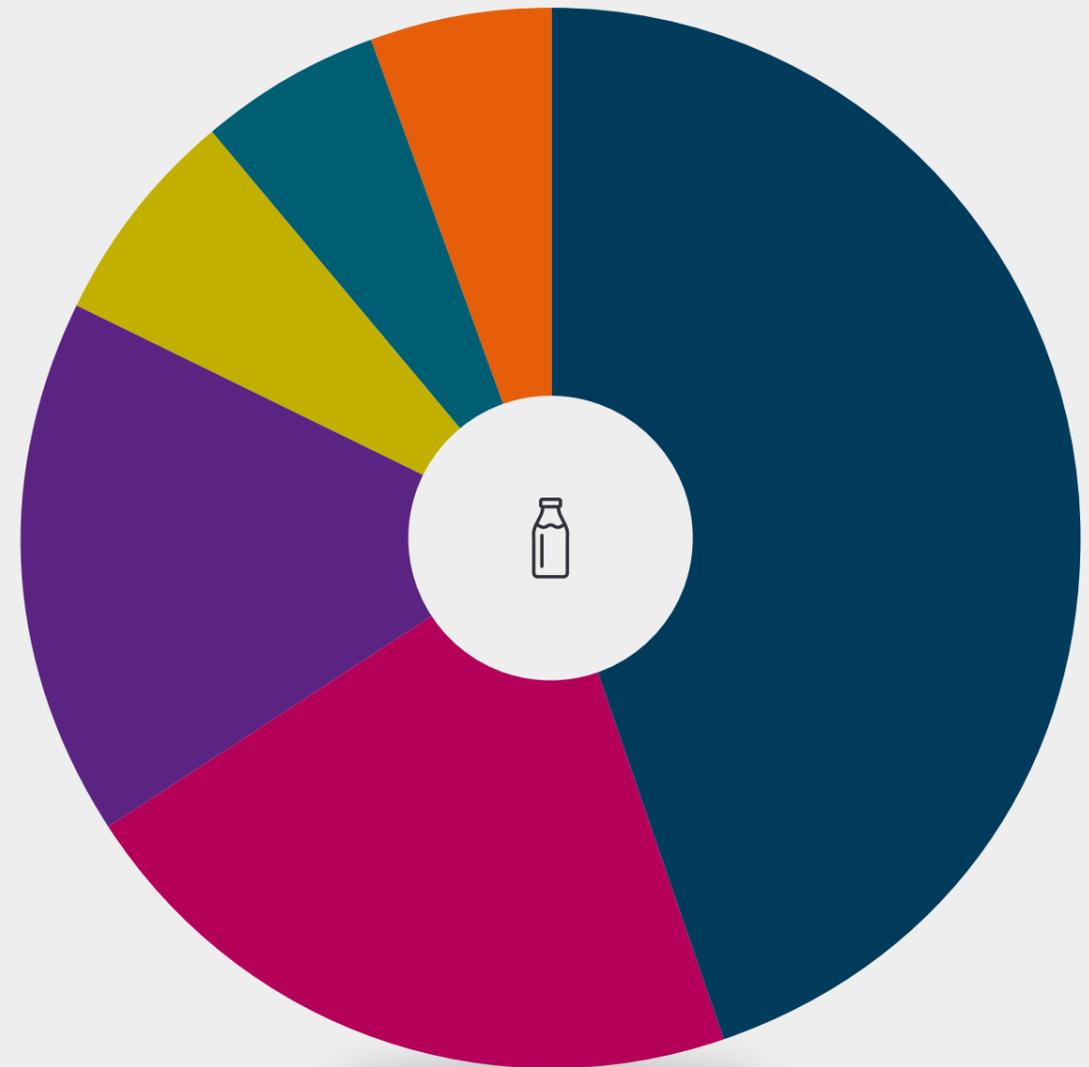
Total of 277 issues

Key	Commodity	%	Main issues
●	Fish - fresh/frozen	57.4	Mercury, histamine, parasitic infestation, altered organolepsis, vet. drugs or <i>Salmonella</i>
●	Crustaceans (crab, shrimps etc.)	14.1	Vet drugs, undeclared or too high level of sulphites, aerobic colony count
●	Fish - smoked/cured/dried	12.6	<i>Listeria</i> , processing issues, fraudulent documentation or <i>C. botulinum</i>
●	Bivalve molluscs (mussels etc.)	8.7	Norovirus, ASP, <i>E. coli</i> , pesticides or PSP
●	Cephalopods (octopus, squid etc.)	5.8	Cadmium or altered organolepsis
●	Other seafood	1.4	Undeclared egg, cadmium or <i>C. botulinum</i>

STATISTICS

Milk & dairy products

Main issues reported during Q2 2017



Total of 97 issues

Key	Commodity	%	Main issues
●	Milk products - cheese	42.3	<i>Listeria</i> , <i>E. coli</i> , mislabelling or fungal moulds
●	Milk products - ice cream ,etc,	19.6	Coliform bacteria, <i>Listeria</i> , norovirus or undeclared dairy
●	Milk products - yoghurt	15.5	Foreign bodies, norovirus or undeclared tree nuts
●	Milk - bovine (cow)	6.2	Foreign bodies
●	Milk products - cream	5.2	Altered organolepsis, <i>Listeria</i> or <i>E. coli</i>
●	Milk products - butter and ghee	5.2	<i>Listeria</i> , adulteration or multiple microbial contamination

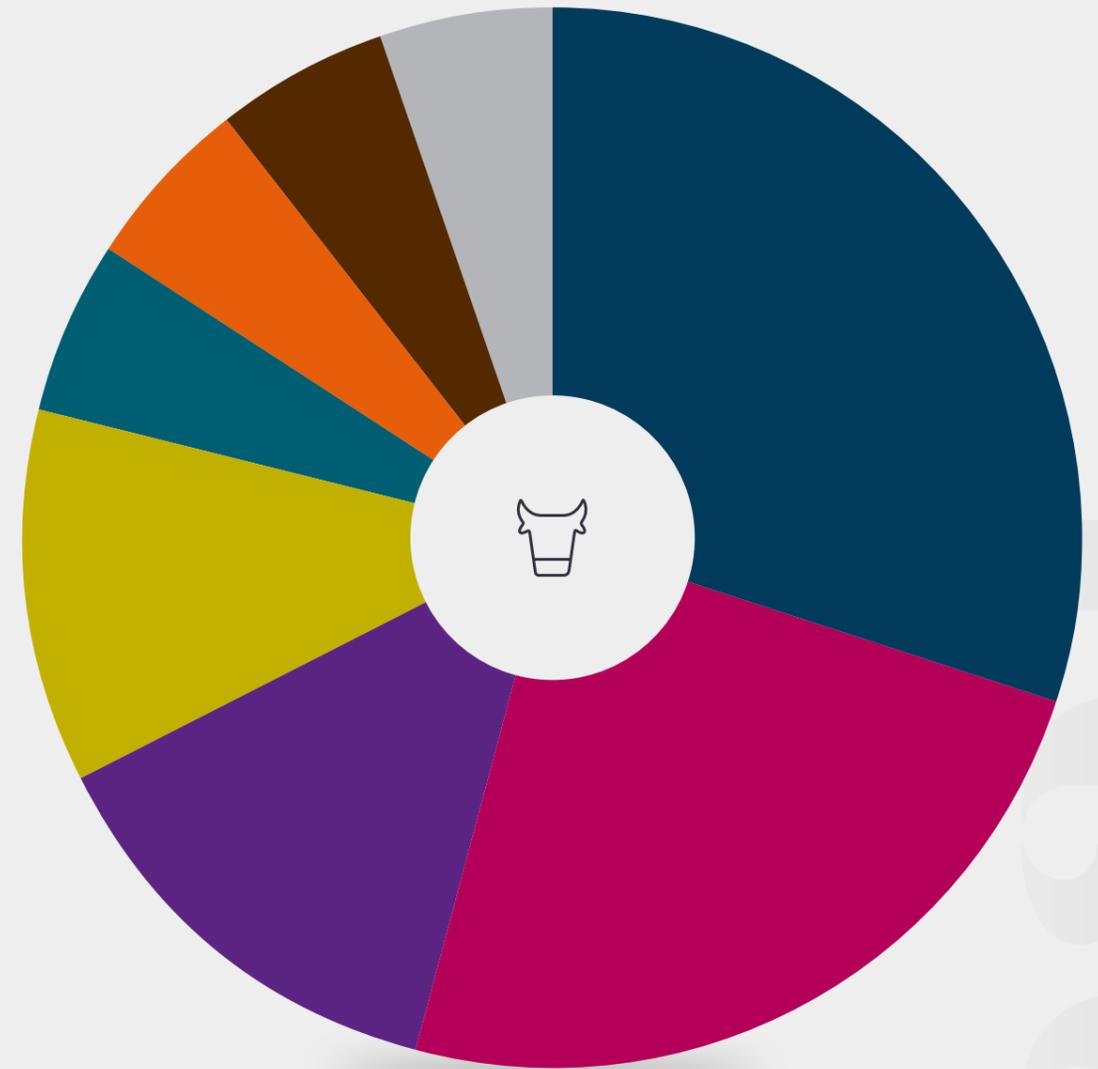
Milk & dairy

STATISTICS

Meat and meat products

(other than poultry)

Main issues reported during Q2 2017



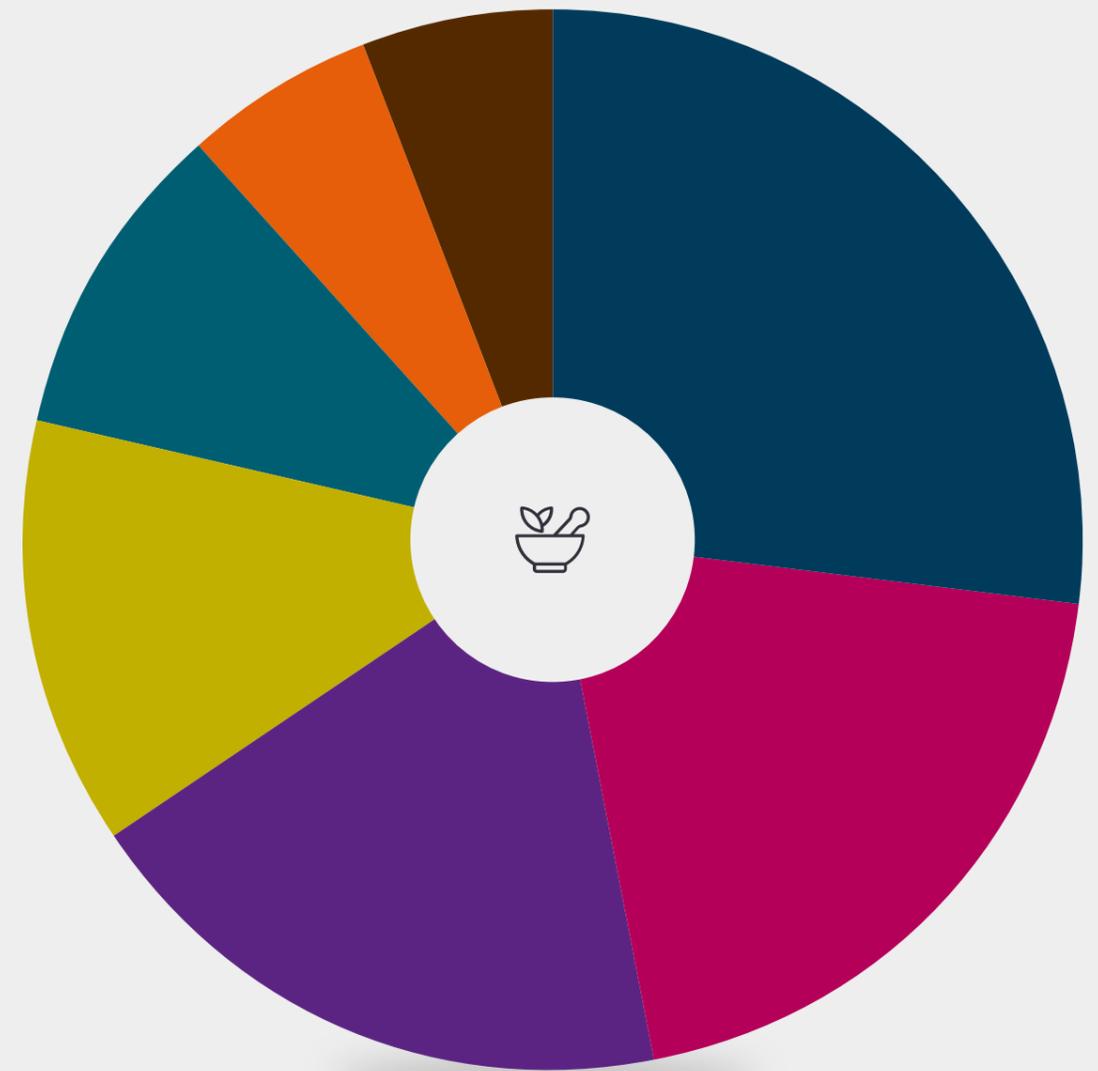
Total of 158 issues

Key	Commodity	%	Main issues
●	Meat products - other	25.3	<i>Salmonella</i> , <i>Listeria</i> , undeclared milk or <i>E. coli</i>
●	Meat products (dried sausages)	20.3	Foreign bodies, <i>Salmonella</i> , <i>Listeria</i> or altered organolepsis
●	Meat - bovine (beef, veal, etc.)	11.4	<i>E. coli</i> or altered organolepsis
●	Meat products - pork hams	9.5	<i>Salmonella</i> , foreign bodies or <i>Listeria</i>
●	Meat, minced, mixed or unspecified	4.4	<i>Salmonella</i> or <i>E. coli</i>
●	Meat - ovine (lamb, mutton, etc.)	4.4	Vet. drugs
●	Meat, ground (bovine)	4.4	<i>E. coli</i> , <i>Salmonella</i> or adulteration/substitution
●	Meat - equidae (horse)	4.4	Vet. drugs

STATISTICS

Herbs & spices

Main issues reported during Q2 2017



Total of 93 issues

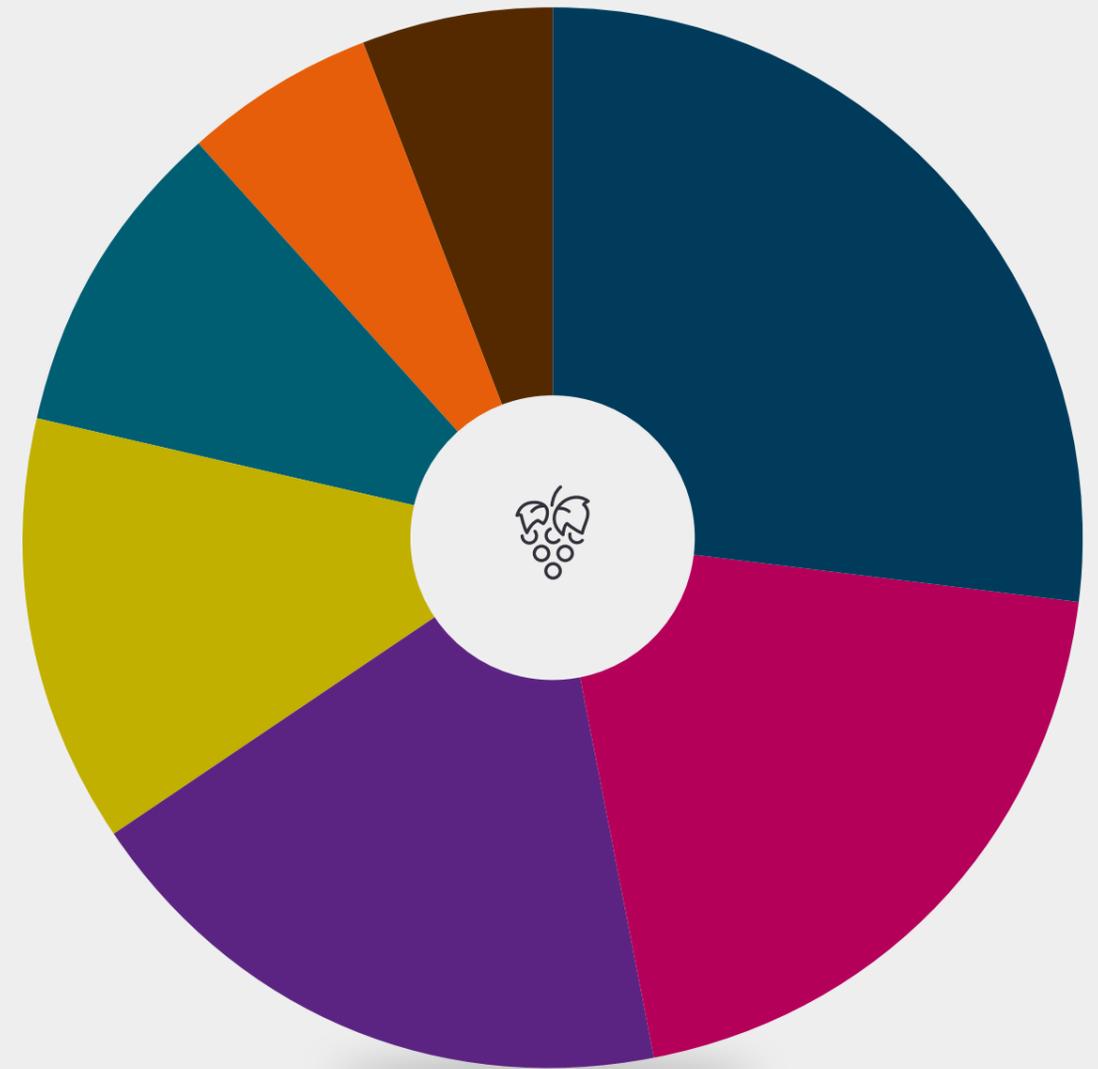
Key	Commodity	%	Main issues
●	Spice mixtures, curry powder	20.4	Undeclared allergens, aflatoxins or fraudulent documentation
●	Paprika and chilli powder	15.1	fraudulent documentation, Sudan dyes or aflatoxins
●	Coriander leaves (cilantro)	14.0	Pesticides or <i>E. coli</i>
●	Ginger	9.7	<i>Salmonella</i> , aflatoxins or pesticides
●	Turmeric (haldi), curcuma	7.5	Lead, Sudan dyes or other unauthorised colours
●	Pepper, black, pink and white	4.3	<i>Salmonella</i> , fraudulent documentation or foreign bodies
●	Cumin seed and ground (jeera)	4.3	<i>Salmonella</i> or pesticides

Herbs & spices

STATISTICS

Fruit & vegetables

Main issues reported during Q2 2017



Total of 255 issues

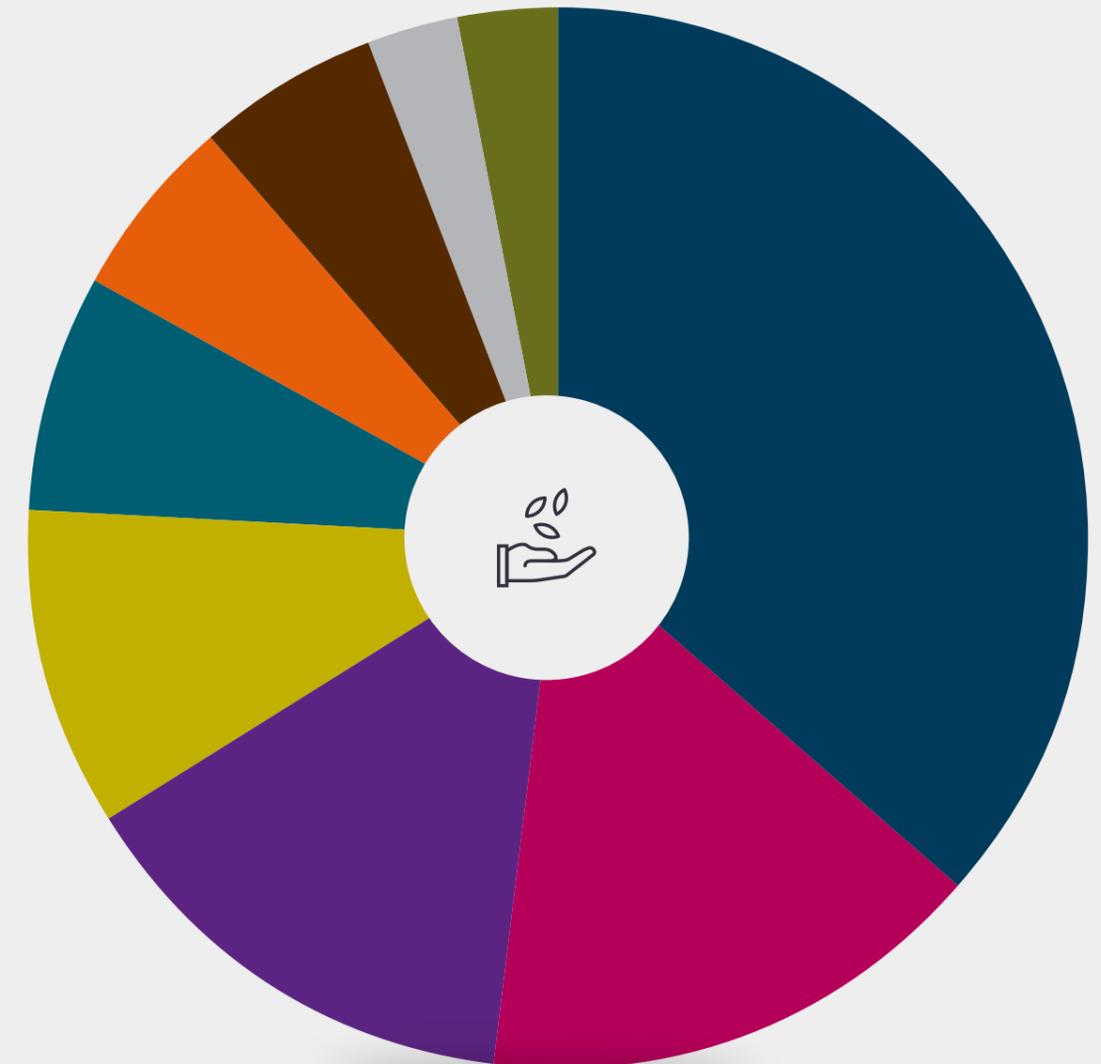
Key	Commodity	%	Main issues
●	Peppers (sweet) - fresh or dried	9.0	Pesticides
●	Raspberries	5.9	Norovirus
●	Okra (bhindi, gumbo, ladies' fingers)	4.3	Pesticides
●	Apricots - dried	4.3	Pesticides
●	Lettuce	3.1	Pesticides or foreign bodies
●	Beans (dry)	3.1	Fraudulent documentation or pesticides
●	Papaya (pawpaw)	2.7	Pesticides or genetically modified material

Fruit & vegetables

STATISTICS

Nuts, nut products and seeds

Main issues reported during Q2 2017



Total of 79 issues

Key	Commodity	%	Main issues
●	Pistachios	32.9	Aflatoxins or <i>Salmonella</i>
●	Hazelnuts	13.9	Aflatoxins
●	Melon (egusi) seeds	12.7	Aflatoxins or fraudulent documentation
●	Almonds including ground almonds	8.9	Aflatoxins, foreign bodies or <i>Listeria</i>
●	Nut butters (except peanut)	6.3	<i>Listeria</i> , foreign bodies or aflatoxins
●	Coconut juice, milk, cream or water	5.1	Undeclared milk or sulphite or unauthorised additives
●	Other/mixed sprouted seeds	5.1	<i>Listeria</i> or foreign bodies
●	Macadamia nuts	2.5	<i>Listeria</i>
●	Cashew nuts	2.5	<i>Listeria</i> or foreign bodie

HORIZONSCAN

Global Food Integrity and Risk System

The BRC Global Standard for Food Safety now focuses more on the transparency of the supply chain.

HorizonScan can help you keep ahead of the game by daily monitoring of emerging, new and novel issues in the commodities you use, wherever you might source them.

The system can also aid with the data needed to complete your vulnerability assessments for BRC in the prevention of food fraud from adulteration, substitution, fraudulent documentation to expiry date changes, production in unapproved premises, production with inspection and unsuitable means of transport.

For supply chain managers with multiple ingredient responsibilities and complex international supply chains, or companies looking for new supply options, this system enables you to conduct top line investigations and be alerted to issues very quickly.

With a global database of raw material and commodity issues across all food integrity areas running from 1999, HorizonScan can help put your mind at rest. Whether you need to illustrate proactive monitoring of supply chain issues, be it fraud and authenticity concerns, pesticide or veterinary drug residues, environmental and other contaminants, microbiological problems or allergens.

- Regular email alerts related specifically to your commodity interests so no need to look every day if time is of the essence
- Searchable summary of all problems in individual commodities at an international level
- Official sites of 63 countries with over 90 independent sources scanned daily
- Links to original data sources
- Historical database of known supplier problems
- Detailed breakdown of fraud and authenticity issues pre-dating horsegate by several years

Risk prioritisation for:

- Pesticides residues
- Veterinary drug residues
- Mycotoxin incidence
- Microbiological incidence
- Unlabelled allergens

International coverage

HorizonScan sources recall, alert and food integrity information at a global level on a daily basis. Reports from major food importing countries and others are all monitored.

Sector coverage

HorizonScan provides information to assist with hazard and risk assessments across all food sectors from around the world.

Issues

HorizonScan provides information on all the issues that may concern you including:

- Fraud
- Residues (pesticides & veterinary drugs)
- Mycotoxins & natural toxicants
- Heavy metals & environmental contaminants
- Processing contaminants
- Microbiological issues
- Undeclared allergens
- Food additives & colours
- Infestation & foreign bodies
- Including emerging and increasing issues

Flexible Search

HorizonScan's modular structure allows you to search for the areas that interest you, either at the individual commodity level or for specific residue or contaminant issues.

Supplier Check

HorizonScan allows you to check individual companies for previous commodity-specific references to food integrity issues in their supply chain.

Up-to-date information

All traded food and commodities are tracked, with data of food integrity issues from 1999 to today. Information on produce & exports from 183 countries, typically with 30 new issues added daily.

KEY FEATURES & BENEFITS

- Flexible search
- Supplier check
- Daily global coverage
- Information bulletins
- Email alerts
- Risk prioritisation

FREE TRIAL
AVAILABLE



Spotting risks in the food chain is a daily challenge faced by growers, importers, processors and retailers. It is a task made all the more difficult by having to wade through endless regulations and other data sources to find the parts that might be applicable to you. FC24 changes all that.

FC24 is a regularly updated, comprehensive guide to EU food contaminants legislation and residue limits. It is designed to meet the needs of food industry professionals connected with:

- Food production
- Own label food retail
- Importing produce and food stuffs into the EU
- Food testing
- National regulatory standards for export to the EU
- Food produce and processing for export to the EU.

Flexible Search

FC24 has been designed to provide simple, intuitive search options allowing you to undertake single or multiple item searches with equal ease. Search by:

- Commodity
- Contaminant
- Country of origin
- Recipe picker

Where appropriate, search results contain links to corresponding EU legislation for sampling protocols and analytical techniques so you can quickly access further information. Links are also made via country of origin and commodity to any provenance concerns which may arise through the protected designation of origin (PDO), protected geographic indication (PGI) or traditional speciality guaranteed (TSG) listings.

Recipe Picker

The recipe picker allows you to select all the ingredients you may be processing to make an existing or new product. You can then find the minimum levels permissible for any contaminants that could be present in the selected recipe ingredients, with the option to display all levels if required.

Information bulletin

An automatic, free weekly email bulletin service informs you of any new or changing legislation affecting the data in FC24.



FC24 pulls together relevant information from across the EU relating to food contaminants and residues, including metals, nitrates, veterinary drugs, pesticides and dioxins.

HOT SOURCE.

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Original thinking... applied