

GLOBAL FOOD INTEGRITY  
ISSUES & EMERGING RISKS

POWERED BY



# HOT SOURCE



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# DEAR READER

Welcome to the third edition of our Hot Source discussing HorizonScan data received in Q1 2017 providing you with the latest emerging risks and food safety challenges all in one handy round up. HorizonScan houses data since 1999, is a web based food safety tool of raw material and global commodity issues across all food areas. The system will keep you posted on global hazards and risks across all food sectors and specific issues that may concern you.

We know that the factors influencing consumer purchasing behaviour are changing. Previously, packaging and a product's intrinsic attributes – those things a consumer could see, touch and taste – were the primary drivers of purchasing behaviour. Today, while product and packaging are still relevant, they are but two of many purchasing drivers. The 'Omni Consumer' wants products that deliver more, such as functional foods that provide incremental health and wellness benefits. He or she also cares more about the impact of these products on individuals, society and the environment. Food security issues will be one of the largest risks to global society over the next 10 years. The world's resources are under huge stress and the issue of food security, 'all people at all times have access to sufficient, safe, nutritious food to maintain a healthy and active life' is receiving growing attention. Global food availability will need to increase dramatically to keep pace with population growth. The FAO estimates that the world's population will peak at 9.15 billion in 2050, an increase of 30% on the 2010 population, and it estimates that global food production must increase by 70% to keep pace.

Armed with this knowledge, and the recognition that food issues are complex and multifaceted - the food chain is facing many interrelated challenges. Globalisation has led to an unprecedented level of interdependence and interconnectivity in the global system, something that brings immense benefits as well as systemic risks. Many businesses will be exposed either directly or indirectly to risks stemming from food safety or security. Having HorizonScan in your armoury will enhance your food supply chain security and safety by providing effective risk management intelligence and peace of mind.

The Fera team



# THINKING *OUT* LOUD

## FEAST OR FAMINE – IMPLICATIONS OF FOOD SAFETY AND SECURITY

Food security concerns are driven by a number of demand and supply side factors. On the demand side, global population growth, demographic change, increasing affluence and migration to urban centres are leading to growth in demand for food and changing patterns of consumption. On the supply side, climate change, water scarcity, resource competition and political drivers, amongst other factors, influence food security.

Climate change is one of the most important supply side drivers of food insecurity with the potential to substantially change global food markets. There is general consensus that the impact of climate change on food production will be largely negative and any modest increases in crop yields in high-latitude regions will be more than cancelled out by losses in the tropics and sub-tropics. Although there is great

uncertainty about the location and magnitude of temperature changes, rainfall and extreme events, they all pose a significant threat to agricultural systems and therefore food supply. In many places, but particularly in poorer countries, climate change will act as a multiplier of existing threats to food security by 2050.

Supply chain and continuity of supply is absolutely critical. Supply chain failure may be as a result of a number of causes, ranging of climate-related natural disasters to day-to-day administration. Today's environment arguably increases these risks, as supply chains are more complex, regulatory requirements increasingly burdensome and threats more unpredictable. The exposure of food and drink companies to these risks has increased with the growth in global supply chains: the more a company

sources its ingredients from around the world, the greater its supply chain risk. Significant food supply chain interruption can cause heavy financial losses and reputational damage to businesses throughout the chain.

Given the importance of processes and timing in the delivery of food products, having intelligent systems in place against supply chain risk could be vital for the food industry. Some businesses still lack awareness of their own supply chains, despite numerous previous cases of food contamination. Supply chain risk is a constant and therefore using intelligent, informative systems, like HorizonScan to play a bigger role in mitigating food risks should be considered.

MILES THOMAS



AT A GLANCE

Q1 RESULTS 2017



HORIZONSCAN HIGHLIGHTS: 2017 Q1 Roundup

Emerging issues

- An emerging issue has been picked up by HorizonScan following the release of a report regarding the attempted illegal import of aubergines into the EU from Uganda. Uganda was the 4th largest importer of aubergines into the EU in 2015.
- For the first time since 2009, HorizonScan has picked up a recall for baby food due to a potential botulism risk. Industry news has also picked up on the recall which was issued following an inspection which was triggered by a consumer complaint. So far the recall has only been issued in Canada.
- An emerging issue has been picked up in HorizonScan following the publication of a report regarding the detection of methomyl (0.089 mg/kg) in carambola (star fruit) from China.
- A report has been issued for organic burdock tea from Germany (with raw materials coming from Croatia) following the detection of the tropane alkaloid atropine. This is the first time this issue has been picked up in HorizonScan.
- Scientists at the University of New Hampshire have identified a new strain of a bacterial pathogen that has contaminated seafood and sickened consumers. It is a new strain of *Vibrio parahaemolyticus*, identified as strain ST631.
- Research carried out by Alaska's Department of Fish and Game and a group of Czech and Slovak academic institutions has discovered that a dangerous tapeworm, *Diphyllobothrium nihonkaiense*, originally thought to be limited to Pacific waters near Japan, can now be found in Alaskan salmon. They are warning people against eating raw fish, particularly raw salmon.
- An emerging issue has been picked up in HorizonScan regarding the presence of the veterinary drug Oxyphenylbutazone in horse meat originating from Canada. Canada was the second largest extra-EU importer of horse meat into the EU in 2015, importing 4,465,000 kg into the EU.



Increasing issues:

- European experts have noted an increasing trend of listeriosis illnesses since 2008, affecting about 2200 people in 2015 and causing 270 deaths. This is the highest number ever reported in the EU and cases mostly occur in the elderly population.
- The results of the 2016 Alltech Canada Harvest Analysis have been released and indicate a high risk for the presence of mycotoxins. Only 2% of the samples tested were found to contain no mycotoxins.
- BIOMIN have released its latest annual mycotoxin survey which, amongst other things, suggests that the levels of fumonisins in maize in North America are increasing, DON levels are elevated in European cereals, Asia is facing a heightened risk from mycotoxins overall, while in South America the risk levels have jumped 62%.
- Incidences of plastic or rubber related recalls have more than doubled over the last year. However, it must be pointed out that this may be due to increased levels of monitoring rather than a larger amount of errors during processing.
- Italy, Germany, Norway and The United States have issued an increasing number of reports concerning Salmonella in shrimp from Vietnam.

Issue	Date	Notifying Country
Salmonella Newport (presence /25g) and Vibrio vulnificus (presence /25g) in frozen raw shrimps (Penaeus monodon) from Vietnam	09/12/2016	Germany
Salmonella (presence /25g) in frozen shrimps from Vietnam, via France	11/03/2016	Germany

- The number of incidences of undeclared milk in pastries, cakes and biscuits originating from the USA is increasing. This is mainly due to a recall of Lenny and Larry brand chocolate chip cookies originating from the USA which have been recalled in several countries around the world, including the UK, Ireland, Malta, Hungary, Spain, New Zealand and the USA itself.

Issue	Date	Notifying Country
Undeclared milk may be present in mantecada (muffins)	09/03/2017	The United States
Undeclared milk in English muffins	30/03/2016	The United States

- There has been an increasing number of issues regarding pesticides in pomegranates from Turkey. Reports from Bulgaria and Italy have been received over the past year of prochloraz, carbendazim, acetamiprid, chlorothalonil and imazalil having been detected above the relevant MRLs.

Issue	Date	Notifying Country
Prochloraz (1.823 mg/kg - ppm) in pomegranates from Turkey	06/03/2017	Bulgaria
Prochloraz (1.4 mg/kg - ppm) and unauthorised substance carbendazim (0.12 mg/kg - ppm) in chilled pomegranates from Turkey	02/12/2016	Italy

- An increasing issue has emerged regarding cheese products in the USA contaminated with Listeria monocytogenes. Recalls have been issued by several companies across a number of states for cheese products and prepared products such as salads and stuffed mushrooms containing cheese. It is believed that the contaminated cheese has come from a third party supplier, Deutsche Kase Haus.

Issue	Date	Notifying Country
Expanded recall of further raw milk cheeses due to presence of Listeria monocytogenes	13/03/2017	The United States
Listeria monocytogenes detected in blue cheese	13/02/2016	The United States

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

Food fraud issues

- The sale of adulterated milk in Pakistan has been carrying on unchecked, meaning consumers have been drinking milk adulterated with chemicals and contaminated water causing various diseases, particularly among children.
- New research carried out by the US Association of Packaging and Processing Technologies has predicted a 3% increase in counterfeiting over the next year, due to an ever increasingly complicated global supply chain.
- Trading Standards UK has carried out a sampling project in Derby following concerns raised about fake 'plastic rice'. None of the rice samples were found to contain the fake rice, though there have been concerns raised that it could be making its way into the UK from countries in Asia. HorizonScan first highlighted the issue of 'plastic rice' in May of 2015 following reports of the rice being found in China, and this was followed by a further highlight in July of 2016 following the release of an EFSA report into the issue.
- Nestle and the China Food and Drug Administration are investigating factories in China for producing £12,000,000 worth of counterfeit food seasoning and sauces. Factories were found to be using ingredients unfit for human consumption, such as industrial salt.
- 300,000 counterfeit chocolates have been seized in China over the 2017 Lunar New Year. The counterfeit chocolates included western brands such as Ferrero and Mars. It is thought that the group responsible (who have now been jailed), made millions of dollars since they began production in 2014.
- Following several complaints, the FSSAI in India has raised concerns regarding cassia being labelled and sold as cinnamon. It is believed the mislabelled cassia is entering the country from China, Indonesia and Vietnam.
- Seafood traders have been charged in China for using formaldehyde to improve the presentation of silverfish sold in a major wholesale market.
- A corruption scandal involving Brazilian meat has come to light following a 2 year investigation and the launch of Operation Weak Flesh on Friday morning (17th March), in which raids were carried out in 194 locations across Brazil. Following the raids over 30 people were arrested, more than 30 senior civil servants have been suspended and 3 meat packing plants have been closed, with another 21 being investigated. The investigation and raids have exposed suspected adulteration of meat products, suggesting certain top meat-packers have been selling rotten products for years, using acid and other chemicals to mask the age of the products. There have also been allegations of bribery of health inspectors. The Brazilian government has met with international trade partners such as the US, China and the EU through fears that a ban on Brazilian meat imports may now be possible.



# NUTS, NUT PRODUCTS AND SEEDS

NUTS, NUT PRODUCTS AND SEEDS – MAIN ISSUES REPORTED DURING Q1 2017  
(FROM A TOTAL OF 97 ISSUES)

59.8%

PISTACHIOS

Aflatoxins, ochratoxin A



4.1%

WALNUTS

Insect infestation, aflatoxins, fungal moulds



13.4%

HAZELNUTS

Aflatoxins, product decomposed



3.1%

COCONUT - DESICCATED, DRIED, FLOUR

Salmonella, too high sulphite level



7.2%

ALMONDS INCLUDING  
GROUND ALMONDS

Aflatoxins, undeclared other nuts



2.1%

MELON (EGUSI) SEEDS

Aflatoxins, fraudulent documentation



5.2%

NUT SPREADS/BUTTERS (EXCEPT PEANUT)

E. coli, aflatoxins, undeclared other nuts/  
peanuts



2.1%

MIXED/SPROUTED SEEDS/SPROUTS

Salmonella, pesticides, natural toxicants



# HERBS & SPICES

MAIN ISSUES REPORTED DURING Q1 2017 (FROM A TOTAL OF 81 ISSUES)

18.5%

CUMIN SEED AND GROUND (JEERA)

Pesticides, undeclared mustard, Salmonella



7.4%

CORIANDER LEAVES (CILANTRO)

Pesticides



17.3%

SPICE MIXTURES/OTHER SPICES

Salmonella, aflatoxins, undeclared  
dairy



6.2%

GINGER

Undeclared sulphite, pesticides,  
undeclared gluten



14.8%

PAPRIKA AND CHILLI POWDER

Aflatoxins, ochratoxin A, product  
decomposed



4.9%

NUTMEG WHOLE AND GROUND

Aflatoxins, fraudulent documentation



8.6%

PAAN LEAVES (BETEL)

Salmonella



4.9%

CINNAMON

Foreign bodies





SEAFOOD

MAIN ISSUES REPORTED DURING Q1 2017 (FROM A TOTAL OF 214 ISSUES)

36.4%

FISH - FRESH/FROZEN

Mercury, vet drugs, product decomposed, histamine



13.6%

BIVALVE MOLLUSCS (MUSSELS, CLAMS)

Norovirus, E. coli, Salmonella



19.6%

CRUSTACEANS (CRAB, SHRIMPS ETC.)

Vet drugs, too high sulphite level, product decomposed



7.9%

FISH - SMOKED/CURED/DRIED

Listeria, processing issues



15.9%

CEPHALOPODS (OCTOPUS, SQUID ETC.)

Fraudulent documentation, cadmium, unapproved premises



POULTRY MEAT AND POULTRY PRODUCTS

MAIN ISSUES REPORTED DURING Q1 2017 (FROM A TOTAL OF 87 ISSUES)

50.6%

MEAT - CHICKEN

Salmonella



6.9%

EGGS

Salmonella



19.5%

POULTRY MEAT PRODUCTS (PÂTÉ ETC.)

Undeclared allergens, foreign bodies



4.6%

POULTRY MEAT PRODUCTS - SAUSAGES

Salmonella



14.9%

MEAT - TURKEY

Salmonella



3.4%

MEAT - DUCK

Salmonella, Listeria, vet drugs





MILK & DAIRY PRODUCTS

MAIN ISSUES REPORTED DURING Q1 2017 (FROM A TOTAL OF 76 ISSUES)

69.7%

MILK PRODUCTS - CHEESE

*Listeria, E. coli, fraudulent documentation*



5.3%

FROZEN ICE-CREAM & LIKE CONFECTIONS

*Listeria, coliform bacteria, undeclared dairy*



9.2%

MILK PRODUCTS - YOGHURT

*Processing issues*



2.6%

MILK PRODUCTS - MILK POWDER

*Altered organolepsis, Cronobacter*



7.9%

MILK - BOVINE (COW)

*B. cereus, Campylobacter, E. coli*



FRUIT & VEGETABLES

MAIN ISSUES REPORTED DURING Q1 2017 (FROM A TOTAL OF 266 ISSUES)

9.8%

PEPPERS (SWEET) - FRESH OR DRIED

*Pesticides, fraudulent documentation, ochratoxin A*



4.5%

CULTIVATED MUSHROOMS AND FUNGI

*Listeria, pesticides, multiple microbial contamination*



8.6%

FIGS - DRIED

*Aflatoxins, ochratoxin A, insect infestation*



4.1%

POMEGRANATES

*Pesticides*



6.0%

CHILLI PEPPERS - FRESH OR DRIED

*Pesticides, aflatoxins, fraudulent documentation, Salmonella*



4.1%

STRAWBERRIES - FRESH OR DRIED

*Norovirus, hepatitis A, pesticides*



4.5%

APRICOTS - DRIED

*Too high a level of or undeclared sulphites, insect infestation*





# MEAT AND MEAT PRODUCTS (OTHER THAN POULTRY)

MAIN ISSUES REPORTED DURING Q1 2017 (FROM A TOTAL OF 134 ISSUES)

27.6%

MEAT PREPARATIONS - OTHER

*Listeria*, foreign bodies, multiple allergens



6.7%

MEAT - PORCINE (PORK, PIG)

*Salmonella*, too high sulphite level, nematode infestation



23.9%

MEAT SAUSAGES (SALAME ETC.)

*Listeria*, product decomposed, undeclared dairy



6.0%

MEAT, MINCED, GROUND - UNSPECIFIED

*Salmonella*, fraudulent documentation



14.2%

MEAT - BOVINE (BEEF, VEAL, COW)

*E. coli*, *Listeria*, vet drugs, *Salmonella*



3.0%

MEAT - OTHER, MIXED OR UNSPECIFIED

*E. coli*, *Listeria*, lead



8.2%

MEAT - PORK HAMS (PARMA, YORK ETC.)

Undeclared allergens, PAHs, product decomposed



## KEY

'%' relates to the number of issues concerning that commodity in its group, for example 36.3% 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* or fraudulent documentation

'Issues' relates to food recalls, border rejections and other such notifications at a global level collated from over 110 official government and other additional reliable sources around the world.

For further information or free trial on HorizonScan, contact Amy Nicklin at Fera, E: [amy.nicklin@fera.co.uk](mailto:amy.nicklin@fera.co.uk), T: +44 (0)1904 465677 or the team on; T: +44 (0)300 100 0320.

To organise a visit or webinar demonstration, contact Barry Hilton at Fera, E: [barry.hilton@fera.co.uk](mailto:barry.hilton@fera.co.uk), T: +44 (0) 7833 200126.



# HOW SAFE IS YOUR FOOD?

## FROM FARM TO PLATE, MAKE FOOD SAFE

### Did you know that with HorizonScan?

- You can check the latest food integrity issue that your supplier has had as well as its historical ones?
- You can design your testing scheme for vet drugs, microbiological contamination, mycotoxins, allergens or adulteration based on frequency of occurrence in the past?
- You can design your testing scheme for pesticide residues based on historical MRLs (maximum residue limits) exceedances?
- When planning to start buying from a new country, you will be able to check for food integrity issues being reported in commodities exported from that part of the world?
- You will be able to see the contaminant trends over the years, giving you the opportunity to approach the future with a more proactive way?
- You will be able to see the exporting trends over the years, allowing you to anticipate potential issues in your food supply chain?
- You will have the data needed to undertake your vulnerability assessment?







# HORIZONSCAN

## GLOBAL FOOD INTEGRITY AND RISK SYSTEM

The BRC Global Standard for Food Safety has been revised and was re-issued as version 7 in January 2015 with audits commencing (back) in July 2015. While all elements of the previous version have been maintained, albeit with some clarification and additions, there is now a significant refocus and emphasis 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 when 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.

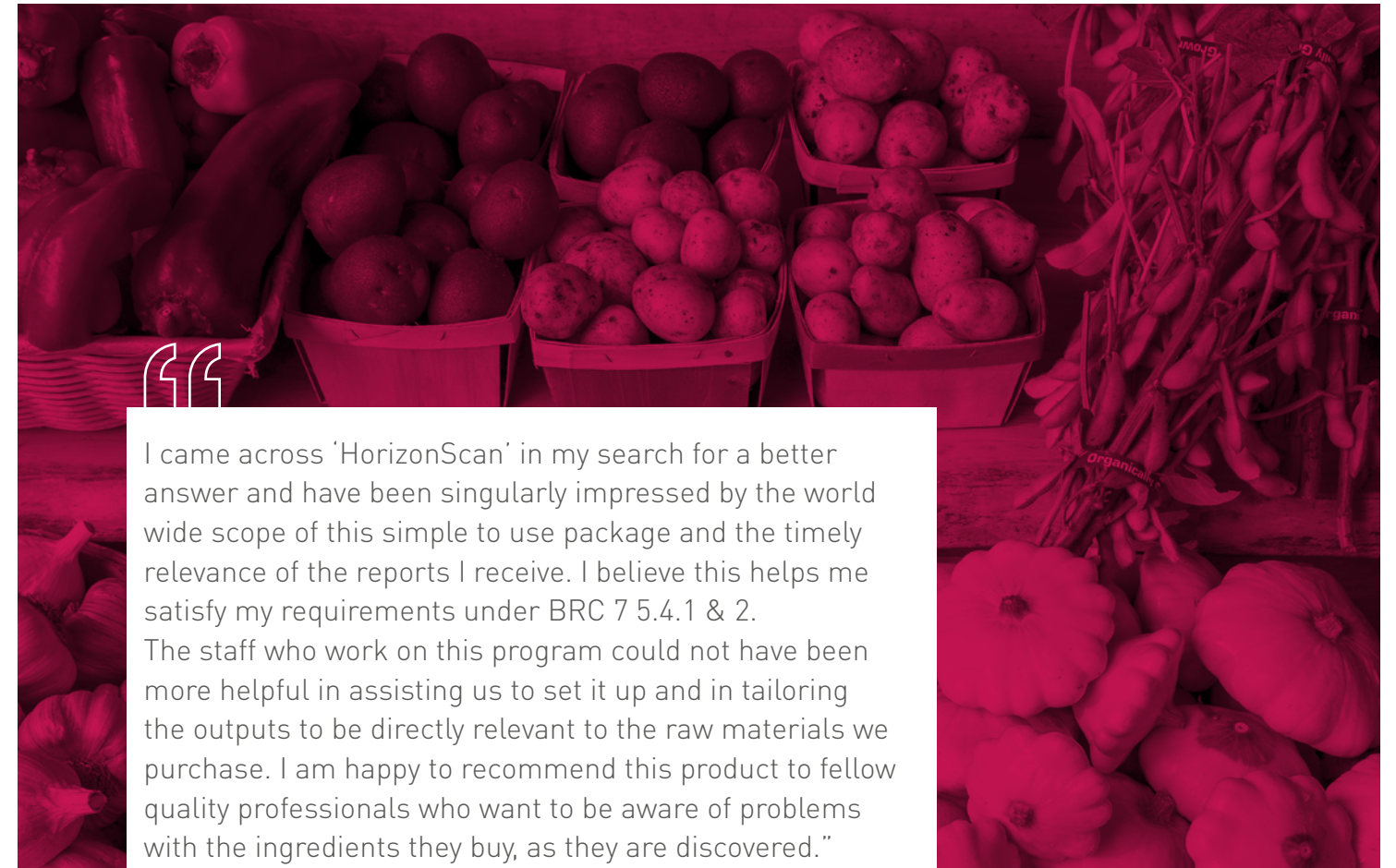
### Sector coverage

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



I came across 'HorizonScan' in my search for a better answer and have been singularly impressed by the world wide scope of this simple to use package and the timely relevance of the reports I receive. I believe this helps me satisfy my requirements under BRC 7 5.4.1 & 2. The staff who work on this program could not have been more helpful in assisting us to set it up and in tailoring the outputs to be directly relevant to the raw materials we purchase. I am happy to recommend this product to fellow quality professionals who want to be aware of problems with the ingredients they buy, as they are discovered."

**Toby Cusworth FIFST, Director LFI(UK) Ltd.**

### 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**



## FC24 - FOOD CONTAMINANTS

### EU FOOD CONTAMINANTS REGULATIONS AND ALERTS

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.

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

#### 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.

## KEY FEATURES & BENEFITS

- Flexible search
- Information bulletins
- Recipe picker
- Email alerts/warnings

**FREE TRIAL  
AVAILABLE**



COMPLIANCE  
MADE EASIER





# FREE TRIAL AVAILABLE

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