Forensics

FOOD RISK UPDATE NEWSLETTER November 2021



Globally logistics remain a concern resulting in delays and reduced

- shipments
- COP26 will refocus businesses on sustainability and environmental commitments
- Coffee remains a concern as a low Brazilian harvest is impacting our supplying countries selling behaviours
- Huge price differentials between UK and EU pork combined with challenges in processing at abattoirs open the door for increased imports
- Palm oil production looks low compounded with Covid and labour issues, demand is likely to outstrip supply

Shipping challenges

Many shipping containers are now spending about ten days at Felixstowe up from an average of four and a half days previously. Around a third of the UK's container freight passes through the port, with the majority coming from non-European markets. Shipping problems are expected to last into 2022.

Sustainability

Seafood companies reaffirm their commitment to seafood supply chain sustainability. Eliminating illegal, unreported and unregulated (IUU) fishing and forced labour, protection of endangered species, phasing out antibiotics reducing plastic pollution and reducing greenhouse gases. This is in contrast to the SeafoodIndex2021 that suggest no progress in IUU since 2019.

Modern Slavery

The Chinese government's extensive human rights crimes against Uyghurs and other Turkic Muslims in Xinjiang have been sharply criticised by a broad coalition of 43 nations at the United Nations.

The European Commission's head announced that the EU will propose a ban on items manufactured using forced labour, saying that human dignity and freedom were more important than profits.

The second Seafood Stewardship Index was released by the World Bench Marking Alliance, which evaluated and ranked 30 of the world's most important seafood firms. In their operations and supply networks, half of the firms questioned had made no or just had a weak commitment to human rights protection.

Palm oil executives were caught on camera in Papua New Guinea (PNG), home to the world's third biggest rainforest, allegedly confessing to human rights violations and tax evasion, connecting worldwide brands to deforestation and child labour.

The Salvation Army reported there were 2662 known survivors of Modern Slavery in England and Wales between July 2020 and June 2021.

Carbon Dioxide

The CO2 industry has reached an agreement with a key CO2 producer in the UK to secure supply to UK industries into early 2022. This follows on from the short (3 week) agreement reached in September.

Fertilizer Prices

Fertilizer prices in France have more than tripled in the last year, putting expenses for farmers between 300 Euros (\$346) and 350 Euros (\$404) per hectare of grain, compared to the previous 150 Euros. In the UK there are quotes of £770/t for ammonium nitrate, this time last year was closer to £220/t.

Energy Prices

The EU seems divided on how to respond to the soaring prices. Countries are reporting a 6 fold price increases. This is a particular concern as eurozone inflation reached 3.4% in September - well above the 2% target.

Cotton

China is buying up US cotton, prices are increasing as a result. The US crop is expected to be large but has been delayed by heavy rains.

Climate Change & Weather

Poor weather has resulted in a poor harvest of grapes and olive oil in Italy. They claim that these problems are caused by climate change, as changing weather patterns result is unpredictable weather. Violent storms in Sicily (southern Italy) are likely to impact the olive and citrus harvests.

Olive Oil

Italy and Greece were expecting a similar harvest to last year, however, reduced yields look likely following a hot, dry summer. Greece is suggesting 15% reduction. Spain is expecting average production with Portugal estimating a 50% increase. Italy is still ~>30% premium over Spanish origin but Greece is trading at a small discount to Spanish. Tunisia is expecting a bumper crop with the potential to increase imports into the EU.

Baby Food

Products from popular baby food companies have been found to contain greater levels of arsenic than the FDA allows, according to a US House Subcommittee report.



Top Fruit

Exporters are concerned that deteriorating ties between Poland and Belarus, its main apple export market, will result in a significant drop in demand for the fruit. Increases in transportation and logistics costs are projected to have little effect on exports to neighbouring nations, while long-distance exporters to China and the Southern Hemisphere will incur considerable costs. UK top fruit harvest is down. Apple varieties that would normally last into the new year are likely to run out this side of Christmas.

Citrus

South Africa's citrus producers claim Transnet represented the greatest danger to their export business. Millions of tonnes of fruit sat uncollected in cold storage at ports. Containers were unable to be loaded onto ships headed for Asia, Europe, and North America due to delays and congestion.

There is still a considerable supply of old crop lemons in Spain, this combined with imported lemons is reducing the price point of the new crop. Catalonia is expecting to have a short citrus season with Clementine and Navel oranges in short supply. There are concerns over the Moroccan citrus, high export cost mean exports to North America and the Gulf are unlikely resulting in 15% of the normal export crop unplaced.

Banana

Ecuadorian banana workers are reporting downward pressure on wages and conditions resulting from migrant labour from Venezuela. Some of this pressure has been reported to be the result of lower contract prices from big buyers in the UK and Germany.

Salad

10% of UK NFU grower members did not plant a third cucumber crop in July citing lack of workers and increasing energy costs. 30% of growers suggest they will not be planting a crop in January - this will impact all glasshouse production - cucumbers, pepper, tomatoes, aubergines, herbs and flowers.

A <u>report</u> published by the EC identified the region of Murcia (Spain) as having the most nitrate contaminated area in Spain and one of the worst in Europe.

Nuts

There are concerns over exploitation and low pay for the Turkish hazelnut pickers particularly by the larger hazelnut purchasers who are accused of commanding a near monopoly.

Ginger

New season Chinese ginger has officially begun, and prices are expected to be a third of last years with sluggish demand and unsold stocks remaining from the previous season. A 30% increase in plantation areas is further expected to oversupply the market.

Cereals

Syrian wheat harvests have hit historic lows, and face an increasing reliance on imports. Wheat futures are running at contract highs, UK balance sheets suggest wheat opening stocks were the lowest seen this century. With 2 bioethanol plants coming back on line the season looks tight. Grain yield in Turkey affected by drought.

Rice

Initial forecasts estimate Italian rice output will decrease 10% resulting from temperature fluctuations. Hailstorms throughout the summer months destroyed up to 80% of the yield on certain farms. Fungal infections brought on by the low temperatures in July also harmed the crop.

Table Grapes

On the west coast US 5% less table grapes were reported in warehouses compare to 2020 and 9.4% from 2019. Stocks of several varieties, including Sweet Globe, Timco, Great Green, and Scarlet Royal, are still low and have declined since September.

Wine

Wine producers in Italy are concerned about a 9% drop in grape yield, significant hikes in grape prices, and increases in raw material and transportation costs. It is predicted that production costs could rise by 10% to 50%. Producers say the situation is further exacerbated by a sharp increase in energy costs and the ongoing container shortage and shipping delays.

Honey

According to the head of the National Union of French Bee-keeping, France's honey production in 2021 about a third of what it was in 2020. Periods of frost, cold, rain, and intense winds throughout the spring and much of the summer, resulting in a dismal harvest.

The EU has agreed to amend food labelling laws to prevent fake Chinese honey from being passed off as genuine. The plan is expected to be completed during France's leadership of the EU Council early next year.

Hot weather in Switzerland this summer has seen honey production steeply decline. There is particular concern for wild bees populations, which could be destroyed as they do not have access to artificial feeders as farmer bees do.

Coffee

"1 million bags of Colombia coffee harvest remain undelivered, "10% of the nations overall crop. Due to poor weather in top producer Brazil, world coffee prices have risen by 55% this year as Brazilian exports fell 29% in September on shipping issues, leading Colombian growers to stockpile supply in the hopes of reselling at a better price.

Palm Oil

Indonesia's palm oil body has raised concerns they will not be able to produce enough palm oil this year to cover increasing demand. Estimates suggest exports may reduce by 50% compared to last year. Indonesia produces >50% of the global demand. Malaysia, the second largest producer, has rampant Covid-19 and closed its borders restricting the migrant workers needed. They have just approved the entry of 32,000 labourers to work on plantations, there are some doubts as to whether this solution will be enough. India has reduced import duty on palm oil in the face of increasing demand. There are concerns the push for palm oil plantations in India is resulting in deforestation.

Organic

Reduced imports of organic raw materials has resulted in feed prices, which account for 65% of the cost of producing organic chicken, rising ~20% in 2021. As global food prices hit a 10-year high, the \$56 billion organic food industry in the United States is also dealing with a lack of shipping containers and a tight labour market.

Organic soybean imports in the United States decreased by 18% from Sept 2020 to Aug 2021. Argentina, the United States' largest supplier, saw a 30% drop in shipments. India's imports decreased by 34%.

US Organic chicken farmers feeding organic US crops have had to raise their prices to compete with firms who previously utilised imported feed.



Pig Meat

The lack of butchery capacity and reduced Chinese demand for minimally processed pork means that despite slaughter numbers remaining similar to last year there are still pigs backed up on farms. Processors are focusing on fewer added value lines for Christmas to help maximise throughput. Despite the widening price differential between UK and EU imports into the UK are still surprisingly low. Germany has become an increasingly active import source for pork with many non EU countries blocking imports following African Swine Fever outbreaks in the country. Denmark and the Netherlands are the key sources for imported bacon. Of note is that breeding numbers for Spain, Ireland and Denmark have increased.

Spanish pig farms have been blamed for a mass fish die-off in Murcia.



Beef

Feed prices have been rising as the global wheat supply has tightened. The newest USDA report narrowed the outlook for wheat even more, bringing the crop's stock-to-use ratio to 35.2 %. Prime cattle are well above normal ~15% above last years Jan-Jun price. Slaughter numbers are down compared to last year. The UK is still importing more than twice the volume we export. 98% of beef imports are declared as originating from the EU.

Eggs

We are back into migration season for wild birds. This has historically seen outbreaks of Avian Influenza - which has resulted in housing orders over winter. DEFRA have already announced and outbreak of highly pathogenic H5N1 Al in captive birds (non poultry - not domesticated breeds) in Worcestershire. Eggs set for commercial layers are lower than the last few years.

Broiler

EU broiler prices have increased 10% in a year. In the UK there are concerns inflation costs could reach double figures in broilers - increases in all input costs from labour, feed through to electricity and gas all contributing. The impact looks to be more reactive in the UK than in the EU so in the short to medium term there may remain incentives for cheaper imports despite the import tariffs. Jan-July EU imports into the UK were ~18% down compared to the same period last year. UK commercial broiler placings were down 2.4%, of more concern is a reduction in broiler breeders of 29% suggesting an the industry expects to see ongoing contraction.

Turkey

UK supermarkets and restaurants are looking to import turkeys from the EU to satisfy UK Christmas demand. Turkey placings are down 7.7%



Dairy

Global milk production is expected to tighten over winter with high feed costs and weather issues impacting production. The USA and EU-27 have reduced their output forecasts but Argentina and New Zealand have increased theirs.

Lamb & Goat

UK lamb prices have maintained a premium above the 5 year average - Jan-Jun price as up 25% YOY.

Haddock

China is the top exporter and the UK is the top importer.

Pollock

A glut of Pollock in the far east of Russia has resulted from near-closure of the Chinese market to imports as a result of Covid-19 in Russia. >60% of Russia's seafood exports are sold to China. Prices have been falling. The Russian government has intervened to subsidise shipments (retrospectively) from 15th April to 31st December on state-owned railways to move the fish from the far east to the West of the country. It seems much of the fish had been routed to China via South Korea. There are suggestions that Russia has now recovered its seafood exports to China.

Tuna

The International Union for Conservation of Nature has reported four species of tuna are showing signs of recovery from overfishing. Yellow-fin tuna, Atlantic Blue-fin, Southern Blue-fin and the Albacore all showed signs of improvement.

Salmon

The Salmon and Trout Conservation organisation are calling on the Scottish Government to substantiate their claims that open-net salmon farming in Scotland is "sustainable". A new study looking into the genetic integrity of wild Scottish Atlantic salmon shows Scottish West Highland and Island wild salmon populations show evidence of interbreeding with farmed (Norwegian) salmon. British Columbia (Canada) has already moved to phase out opennet salmon farming by 2025. Scottish salmon prices are increasing to new highs, at the same time Norwegian and Chilean farmed salmon prices are falling.

Crab

Alaska snow crab harvest has been reduced by ~90% as a result of rising temperatures in the Bering Sea.

Shrimp

While not officially published it seems the US will lift its embargo on wild caught shrimp from Mexico (enforced as a result of Mexican shrimpers failing to use turtle excluder devises on their vessels.)

Sustainable Fishing

The Marine Stewardship Council has highlighted the overfishing of North Atlantic mackerel, herring and blue whiting as a result of international governments failing to reach a quota sharing agreement. As a result all MSC certified mackerel, Atlanto-Scandian herring and blue whiting fisheries in the North East Atlantic have lost MSC certification. Several major companies have already pledged to stop sourcing from the disputed fisheries until the guidance from the International Council for the Exploration of the Seas is followed.

UK/France Fishing Rights

Tensions are rising again after the UK rejected fishing permits to dozens of French fishing trawlers after they failed to provide sufficient evidence of grandfather rights. The French government has threatened a ban on UK boats in French ports, threats to terminate the UK's energy supply and onerous checks on cross-channel trade.





Covid-19 Country Risk Tracker

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Country	# Cases	Mortality #	Reported cases as % of the Population	% mort. of +ve cases	Pandemic Stage	Top Scale on graph	Weekly Reported Cases as of 28/10/21	Country	# Cases	Mortality #	Reported cases as % of the Population	% mort. of +ve cases	Pandemic Stage	Top Scale on graph	Weekly reported Cases as of 28/01021
United Kingdom	8,978,460	140,628	13.23%	2%	1	600K	الله ا	Turkey	7,761,505	69,998	9.44%	1%	7	1.5M	معل
France	7,248,346	118,561	11.1%	2%	1	400K		Pakistan	1,271,687	28,431	0.58%	2%	>	50K	المعال ا
Netherlands	2,155,772	18,823	12.58%	1%	1	80K	بالمظر	India	34,246,157	457,191	2.48%	1%	->	3М	
Germany	4,573,462	95,625	5.46%	2%	1	200K		Indonesia	4,243,215	143,361	1.55%	3%	>	400K	
Ireland	438,124	5,436	8.87%	1%	1	50K	سلم	Bangladesh	1,569,162	27,854	0.94%	2%	1	150K	المسم
Italy	4,6757,231	132,004	7.78%	3%	1	300K		Vietnam	910,376	21,966	0.94%	2%	1	100K	
Belgium	1,351,913	25,976	11.66%	2%	1	150K	مطم	Philippines	2,775,930	42,577	2.53%	2%	1	200K	
Spain	5,008,887	87322	10.71%	2%	1	300K	لملهم	Thailand	1,893,941	19,070	2.71%	1%	1	200K	
Poland	3,008,294	76,875	7.95%	3%	1	250K		Russia	8,298,850	231,931	5.69%	3%	1	300K	
Switzerland	872,558	11,233	10.08%	1%	>	60K		Ukraine	3,012	71,141	6.89%	2%	1	200K	
Norway	205,321	900	3.79%	1%	1	15K	ألحسها	Serbia	1,131,819	9,826	12.65%	1%	1	60K	
Denmark	387,297	2,711	6.69%	1%	1	30K		Kazakhstan	1,015,439	17,050	5.41%	2%	1	60K	أسدا
Sweden	1,171,512	15,023	11.60%	1%	>	60K		Nigeria	211,678	2,892	0.10%	1%	1	15K	
Greece	734,778	15,856	7.05%	2%	->	25K		Ethiopia	364,098	6,428	0.32%	2%	1	20K	14
USA	45,831,492	743,448	13.85%	2%	>	2M	-	DR Congo	57,470	1,091	0.06%	2%	1	ЗК	أحمأ
Canada	1,718,028	28,981	4.55%	2%	>	80K		Morocco	945,504	14,654	2.56%	2%	1	80K	
Brazil	21,781,436	607,068	10.25%	3%	>	600K		South Africa	2,921,114	89,151	4.93%	2%	1	150K	
Mexico	3,798,286	287,631	2.95%	8%	>	150K		Egypt	328,209	18,483	0.32%	6%	1	15K	
Chile	1,688,454	37,719	8.83%	2%	1	60K		Kenya	253,018	5,270	0.47%	2%	1	10K	المد
Colombia	4,997,444	127,195	9.82%	3%	->	250K	المسا	Madagascar	43,626	963	0.16%	2%	->	5K	
Peru	2,199,036	200,179	6.67%	9%	->	80K		New Zealand	6,125	28	0.13%	1%	1	800	

Source; Johns Hopkins University

NOTE: the graphs are all to different scales - the top scale value is noted in "top scale on graph" column. This is the MAXIMUM number on the Y axis - maximum number of daily reported cases. The x axis is the same for all graphs - all started from mid Jan so reflect the timing of the pandemic outbreak in each country.



IN THE NEWS: Octobei

Produce

High pesticide levels were detected in seven types of green vegetables from India, including yardlong beans and gourds,

The Spanish farmer sued for growing "nadorcott" mandarin oranges, whose patent is owned by the Moroccan royal family continues to fight on. The case was thrown out by the courts as the case was brought outside the 3 year window. However, several court hearings later, the CJEU considered the 3 years to start from when it became known the farmer was cultivating outside the permit. The case continues 60,000 persimmons have been stolen from an orchard in central Japan. The fruit was of the Fuyu variety, was valued at over \$26,000.

A garlic scam in Sri Lanka where garlic is being sold below market prices by officials identified 56t of garlic released from a warehouse without an invoice.

Protein

Officials carried out surprise checks at meat stalls in India after receiving a tip about the selling of contaminated meat. Illegal dyes were confiscated.

17,000 hairy crabs as well as 1.1t of frozen food believed to have been smuggled from China into Hong Kong was seized by authorities.

Grocery

At least 30 people were hospitalised after consuming adulterated buckwheat flour in India. As food shortages intensify in Sri Lanka amid a foreign currency crisis, the cabinet agreed to de-regulate pricing for milk powder, wheat flour, sugar, and liquefied petroleum gas in the hope of increasing supply and combating black market trade.

Malaysian authorities seized 14 million kg of flour worth over \$5 million USD from Australia. Authorities discovered incorrect and unclear certification during an inspection which prompted the seizure.

An Indian court has demanded testing of tapioca sago varieties for adulteration following claims of adulteration with chemicals and limestone powder.

415 out of 469 samples of mustard oil tested in 5 Indian cities were found to be adulterated. Samples contained metanil yellow, caster oil, white oil, argemone oil and an excessive amount of hexane.

Dairy

2,000 litres of adulterated milk were destroyed by the Punjab Food Authority (PFA) during a search on a milk factory.

Pakistan arrested 19 milk sellers for selling adulterated milk. Adulterated milk was discarded. Six milk vendors were detained and three stores were shut down by authorities in Pakistan for selling adulterated milk. In another incident a further 1000 gallons of adulterated milk was seized. According to tests, the milk was mostly made up of water and detergents, with low levels of fat and natural nutrients

Indian police have busted a plant producing contaminated milk powder. Samples have been sent to a lab to determine the composition of the adulterated products.

50% of paneer samples were found to be adulterated and unfit for human consumption in tests in an Indian city.

Seafood

Freshwater shrimp and lobster that had been injected with jelly were found in Cambodia. The fish was tampered with in order to inflate the apparent weight of the product and deceive customers.

Spice

In Pakistan 120 kilogrammes of contaminated red chilli powder was confiscated. The red chilli powder was made by combining low-quality red colour with chemical additives.

2,500 kg of adulterated spices were recovered in Pakistan. Red chilli powder was discovered to be adulterated with illegal dyes and chemicals.

The police's enforcement division seized a vehicle carrying at least 222 bags, each containing 50 kg of the spice kala jeera. The spice had been adulterated with rodent excrement and motor oil.

A trader in an Indian market has been arrested for adulteration of cumin with sulfa seeds.

Beverage

After 34 people died from drinking illegal booze laced with methanol, authorities in Russia announced that they are providing food in return for alcohol. Earlier this month, 67 people died after consuming poisoned alcohol. 6 people have been detained so far.

Counterfeit Nescafe Gold branded coffee is circulating in Germany sparking a recall. There are concerns it contains broken glass and plastic.

Counterfeit Tata tea was recovered from a wholesaler in India.

UK

2 people have been charged with modern slavery and human trafficking. A further five people were arrested in connection with an ongoing investigation into modern slavery and human trafficking, with further arrests pending for cannabis production and possession with intent to provide, as well as gun possession.

Soybeans from deforested Cerrado land in Brazil are mixed in with certified beans and fed to dairy calves in the UK, according to an investigation by ITV News, the Bureau of Investigative Journalism, and Greenpeace Unearthed. Several products from popular confectionery and dairy brands have been implicated.

Due to a case of bovine spongiform encephalopathy (BSE), or 'mad cow' disease, in the UK last month, China customs prohibited the import of British beef from animals under 30 months of age. The prohibition went into force on September 29. Philippines have also announced a ban, though shipments are permitted as long as the slaughter and production dates were on or before August 31, 2021.

According to a new British Horse-racing Authority (BHA) law, as of next year, race horses can still be transported to a slaughterhouses to be put down humanely, but they can no longer be sold for food.

Australian beef was found labelled with a Welsh PGI label.

Europe

The EU has offered to remove the majority of border inspections on British food and drink entering Northern Ireland. The proposed measures by EU officials will eliminate approximately 80% of checks and half of all customs paperwork if the protocol is fully implemented. Northern Irish stores that carry mixed consignments of UK food items are anticipated to gain from the change, with only once a month customs filings needed.

Further afield

12 firms/traders in India were fined for selling contaminated products.

Indian police received information that a truck arriving from Dhar district was carrying adulterated milk with tampered seals. Some of the original milk had been removed from the tanker and sold in local stores, while the remainder had been tainted with water

Three renowned food and confectionery businesses in India had heavy fines imposed on them for the adulteration of sweets and snacks. Authorities in India seized 10 cartons of rotten eggs intended for a bakery unit in Cuttack.

The PFA conducted a major crackdown in several sections of the city. Disposing of: 7,167 litres of expired juice, 5t of red chillies, 3t of papadum, 3t of prohibited Chinese salt as well as other items.

Phthalate and novel plasticizers were found in foods tested from US fast food chains.

An import company in Singapore was fined over illegal imports of meat, seafood and other products.

The lawsuit into child slave labour on cocoa plantations continues in the US after the Ninth Circuit court ruled it could not be dismissed.



SAFETY: October

No of Alerts Country France Turkey United States Spain Poland Germany China India Italy Netherlands Belgium United Kingdon Eavpt Canada Argentina Austria Georgia Serbia Ukraine Denmark Sweden Fcuador Iran Uraguay Thailand Hungry Czech Republic **Dominican Republic** Brazil Finland Ireland Peru Ghana Slovakia Greece Syria Australia Uganda Nigeria Croatia Vietnam Bangledesh Azerbaijan Portugal United Arab Emerites Russia Bosnia & Herzegovina Senegal New Zealand Hong Kong Tunisia Singapore Falkland Islands Morocco South Africa Bulgaria Malaysia Unknown Origin Mauritania Mexico Zimbabwe Kosovo Latvia Total

SUMMARY

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There were 147 Red, 81 Amber and 35 Green for a total of 263 safety alerts and product recalls* in October.

The majority of alerts were issued due to pesticide contaminations (40% due to ethylene oxide, 29% due to chlorpyrifos and 5% due to propiconazole). Produce accounted for 47% of pesticide alerts, with 12% for additives and 3% for cereals.

67 alerts were issued for microbiological risks (33 for Salmonella, 16 for Listeria, 6 for E.coli, 3 each for mould and unknown microbes, 2 for parasites, and 1 each for Clostridium, Bacillus cereus, Hepatitis A and Norovirus).

Seafood, produce and nuts accounted for 41% of safety alerts issued in October.

Top 3 number of alerts by commodity

1. Produce: Peppers, oranges and mandarins

- 2. Seafood: Molluscs, salmon and tuna
- 3. Nuts: Hazelnuts, pistachios and peanuts

Top 3 number of alerts by county of origin

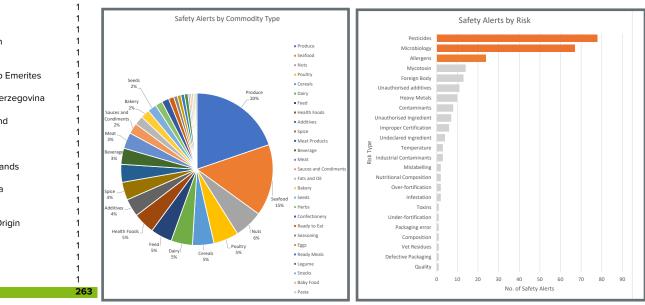
1. France: Sausage, milk, pastries and animal feed

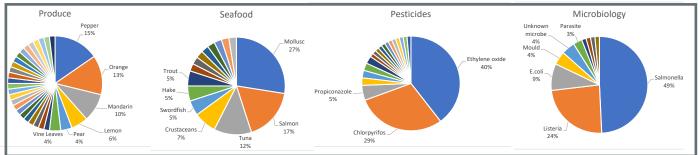
2. Turkey: Mandarins, peppers, vine leaves and pistachios

3. United States: Pork, dog food and pistachios



*Safety alerts & product recalls compiled from RASFF, FDA, AFSCA, CFIA, Rappel Consommateur, potraviny na pranyr, SFA, CFS, MPI, FSAI & Food Standards AU





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Consumer Trends

<u>ADM</u> breaks down 8 potential growth areas for humans and pets;

- 1. Nourishment for the whole self
- 2. Plant based or flexitarian lifestyles
- 3. Microbiome
- 4. Clean and transparent sourcing
- 5. Humanization of pets
- 6. Precise and responsible animal feeding
- 7. Sustainable goodness
- 8. Advance renewable's and biosolutions

Dog and cat nutritional guidelines

The European Pet Food Federation has updated its "<u>Nutritional Guidelines; For</u> <u>Complete and Complementary Pet Food</u> for Cats and Dogs".

Insect Protein

Exiting from the EU has left the edible insect sector in disarray. The current legal status of edible insects in the UK is that only the German cheese mite is currently compliant with the novel food regulations (retained Reg 2015/2283). No other species were authorised by the EU prior to Brexit and as a result are not authorised by the FSA/FSS to be placed on the market. In Northern Ireland the following species may continue to be placed on the market while the EU processes their authorisation;

- Alphitobius diaparinus
- Acheta domesticus
- Tenebrio molitor
- Gyllodes sigallatus
- Schistocerca gregaria
- Locusta migratoria

All other species should not be placed on the market until after authorisation has been granted. As these species were not authorised prior to Brexit transition there are not permitted on the GB market.

The UK's newly established independent Advisory Committee on Novel Foods and Processes requires companies to reapply for edible insect classification. Costs of generating the scientific data required are estimated to be "£80K.

New Zealand and Australia are regulating insects under general food law.

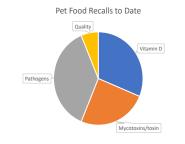
These restrictions on insects in human food will undoubtedly limit the growth of insect based pet foods.

Recalls

NutriSource recalls 1,600 cases of pet food

for elevated vitamin D. (Tuffy's Pet Foods - USA)

So far in 2021 petfood recalls have been split as follows;



Pancytopenia

The last update from the RVC was in mid September with 565 cats known to be affected by pancytoneia with 63% mortality. No cause has been definitively identified. Investigations did find measurable levels of tricothecene mycotoxins (T-2 and HT-2 toxins) in some feed samples analysed. Cats are known to be particularly sensitive to trichothecenes. These are usually found in cereal products but have also been reported in infected potato tubers.

Whale Meat Concerns

Animal rights charities have claimed that whalers in Norway are selling whale meat as pet food. The declining popularity of whale meat in the Norwegian population has let to excess supply. At least two whaling companies have admitted to selling whale meat and oil as dog food.

In the News

Over a three-year period, Norway recorded 13 human Salmonella illnesses connected to snake feeding and handling. The epidemic in Norway is caused by the same strain of Salmonella Enteritidis that is responsible for an outbreak in the United Kingdom involving rodent feed for reptiles.

Pea protein in cat food

Vets are calling for pet food manufacturers making cat food containing pea protein as "not suitable for ferrets" as it may be responsible for a rise in cystine urolithiasis (a form of kidney stones)

Identifying sources of adulteration

<u>An article published in July looked at the</u> use of next generation sequencing to identify potential sources of mercury in commercial cat and dog foods. The key findings were as follows;

- Mercury was found in 3% of tested foods.
- Based on the genetic results adulteration was common in commercial pet foods.
- No single ingredient was the main source of mercury in commercial pet foods.

Food Forensics' laboratory is accredited for Next Generation Sequencing. This type of testing is widely used in human food to detect the unexpected. We can test for animal (including insects), plants, fungi and bacteria. This is particularly useful due diligence where ingredients are excluded for allergenic reasons ie; detection of beef, chicken and wheat.

Toxic element in pet foods

A <u>pape</u>r reviewing toxic metals in pet food concluded carbohydrate sources had the highest level of most toxic metals with most tested foods exceeding maximum tolerable levels on at least one element. Interestingly pork fat had higher levels of arsenic, mercury and antimony than fish oil and poultry fat.

We see from sequencing herbs and spices a reasonable level of field weeds. When included in low levels there are rarely an issue but it may be worth considering with forage based pelleted feeds, feeds containing herbs or other plant based materials, undertaking some Next Generation Sequencing to understand exactly what is present in the material.

