



***Campylobacter* – FSA survey latest findings/Danish outbreak/FSAI advice**

In the UK, the major retailers have published the latest results of their FSA *Campylobacter* survey. The 1st quarter 2020 testing results show a slight increase from levels recorded from previous quarters. The FSA's target is that less than 7% of poultry sold at retail should have levels above 1,000cfu/g. The latest data set reveals that one of the major retailers had 9% of chickens with levels above 1,000cfu/g but the FSA indicated that overall levels remain within their target.

Data suggests that for some individuals, the infectious dose for *Campylobacter* may be as low as 100 organisms.

However, it is thought that levels between 100 and 1,000cfu/g in raw chicken are unlikely to translate to an infectious dose if the chicken is thoroughly cooked and good hygiene practices such as handwashing after handling the raw meat and the use of separate utensils to avoid cross-contamination are followed.

More than 100 people have been ill following a *Campylobacter* outbreak linked to the consumption of pasteurised milk in Denmark. Between May 28th and June 5th, 107 people living on, or who had recently visited Bornholm (an island in the Baltic Sea) tested positive for *Campylobacter jejuni*. Patient interviews suggests that consumption of the pasteurised milk was the likely cause, but so far all testing of the milk has been negative.

Meanwhile the Food Safety Authority of Ireland (FSAI) used the backdrop of World Food Safety Day on the 7th June to re-emphasise the message of not washing raw poultry prior to cooking. They stated that washing raw poultry under a running tap can spread *Campylobacter* up to 80 centimetres from the sink, potentially contaminating food contact surfaces and utensils. Dr Pamela Byrne, FSAI chief executive, stated that "*Campylobacter*, needs to be managed throughout the entire food chain from farm to fork. People preparing raw chicken should assume that it contains harmful bacteria. There is no step during processing chicken which can guarantee removal of bacteria, except by cooking at the correct temperatures".

Food Standards Agency - recent updates

The Food Standards Agency (FSA) have publicised a new blog feature which was released for the first time this week. In the first issue the outgoing Chief Scientific Advisor of the FSA Professor Guy Poppy has reflected on his 6 years in the post, and commented on the major successes which he felt the FSA had achieved during his tenure.

In terms of microbiology he cited the advances made in the field of Anti-Microbial Resistance (AMR) made by the FSA over the last 6 years. He stated that COVID-19 illustrates only too well what happens when you have no effective treatment for a microorganism.

The use and misuse of antimicrobials in humans and animals contributes to the development and spread of AMR bacteria through many routes. Resistant bacteria can be spread to humans in the food chain through:

- animal slaughtering processes – meat can be contaminated by resistant bacteria present in the animal's digestive tract
- manure – resistant bacteria in animal faeces used to fertilise land can transfer to the environment
- water – vegetables, fruit and shellfish can become contaminated if the water used to grow them contains AMR bacteria
- cross-contamination– food handled without the right hygiene practices can spread resistant bacteria from one type of food to another or from the environment to food

AMR bacteria can make antibiotics, including those used for treating humans, less effective. The risk to public health from AMR microbes in food can be reduced by following the '4Cs' (cleaning well, cooking thoroughly, chilling correctly and avoiding cross contamination) when transporting, storing and preparing food.

The FSA has also recently published findings from their survey on consumer habits and it revealed that 50% of people had eaten food past its use by date and that a quarter of people said they still wash raw chicken (see the previous article). Half said they always or most of the time use different chopping boards for different foods but a quarter said they sometimes do this and the other quarter reported they never do it.

All of which illustrates that in terms of food safety education, we still have a long way to go.

Primula recalls cheese spread due to botulinum concerns

Primula Ltd. has recalled cheese spread in tubes in the United Kingdom and Ireland because of possible contamination with *Clostridium botulinum* due to a production fault. Primula recalled 10 varieties after finding one product may have contained *Clostridium botulinum* and due to concerns other items in the range could have been affected.

Finland also report fewer food related incidents during lockdown

Following on from last month when we reported on how the number of foodborne outbreaks had reduced during the COVID-19 lockdown, the Finnish Institute for Health and Welfare (THL) have stated that more than four times fewer suspected food and waterborne epidemics have been reported in Finland in the past few months.

Between March and May, four suspected foodborne outbreaks were reported, compared with an average of 18 in previous years. The agency believes this is because of the coronavirus pandemic and associated limitations and recommendations. When hands are washed diligently and food is prepared for smaller groups, there are fewer epidemics, the THL reported.

Pet food containing raw meat recalled in Canada

The Public Health Agency of Canada has issued a recall notice for raw pet food as this has been shown to be the cause of an outbreak of E coli 0157. Four people have become ill and all have been exposed to the same brand of frozen raw pet food whilst preparing it for their pet dogs

As we stated in this month's opening article, all raw meat should be handled with care as it may contain pathogens, and many people will have sympathy for businesses who have to recall raw meat in these circumstances.

The Public Health Agency of Canada stated that "if you choose to feed your pet a raw food diet, it is recommended that you buy from companies that use meat-derived ingredients that have been prepared in sanitary conditions and passed inspection for human consumption. Also look for companies that have a Hazard Analysis and Critical Control Points protocol in place, which sets safety standards and practices, and helps to greatly reduce the risk of bacterial contamination".

This may be a laudable approach, but it can be argued that the possibility of pathogens being present on raw meat is still very real even if the meat has been processed in sanitary environment and that the correct assumption should be that all raw meat may contain pathogens rather than indicating that raw meat which has been processed in optimal conditions is more likely to be pathogen free, as this may lead to a false sense of security by the consumer.

Contaminated seeds may lead to internalisation of pathogens in salad leaves

The potential for pathogens such as *Salmonella*, *Listeria* and *E coli* 0157 to be present on ready to eat salad crops is well documented and this is why bagged salad leaves are either pre-washed in a chlorine solution or sold with clear instructions for the consumer to wash the product prior to consumption. It is acknowledged that thorough washing should be sufficient to remove pathogens from the surface of the salad leaves, but what if the pathogens are actually internalised in the structure of the leaf and stem?

Research carried out for the Arizona Commerce Authority has shown that if the seeds are contaminated with *Salmonella*, the organisms can become internalised and therefore impossible to remove by conventional washing techniques. The researchers inoculated spinach seeds with *Salmonella newport* and subsequently detected the bacteria from internal structures such as the leaves, stem and roots. The organism was also detected from surrounding soil and run-off water, suggesting that seed contamination can also result in the spread of the organism and subsequent environmental contamination.

Swiss Listeria outbreak linked to cheese

At least 11 people in Switzerland have been infected by *Listeria monocytogenes* and two have died after eating contaminated cheese.

Officials from the Federal Food Safety and Veterinary Office (FSVO) stated that analysis is pending for a further 10 infections to see if they belong to the outbreak cluster.

The outbreak has also been linked to 4 patients at a hospital in Switzerland who had contracted Listeriosis which was reported earlier this month, although it is not clear if the patients consumed the cheese whilst in hospital. Three people recovered but one person with underlying health conditions died.