

Preplanning your approach

In the area of food safety, it pays to know your adversary and to plan your approach based around that knowledge.

Food safety expert Clare Hamilton-Bate provided a unique viewpoint to attendees at the industry conference on how work undertaken in this area can be used effectively within the risk management project to best prepare industry to react correctly to situations that may arise.

Clare's work feeds directly in the risk management project where she works alongside Patrick McClelland [see story on Page 54].

She told delegates that while the crisis management case studies focused on the unimaginable, her focus is on the way in which preplanning can pre-empt and where necessary help those situations.

"To succeed you have got to understand your adversary and what the problem is. If you don't understand the problem, you are not going to be able to prevent it or ultimately fix it."

Three types of food safety risk

She explained that there are three types of food safety risk: there is a risk attributable to something, you know where it came from and the cause of the problem; there are non-attributable risks where you really can't work out why it happened, but it is directly linked to you, and then there are the real left-field risks.

Managing Food Safety Risk

- **Attributable Risk**
- **Non-attributable Risk**
- **'Left Field Risk'**

She said there have unfortunately been plenty of examples to draw on over recent times.

"If we look at the recent melon situation first, it was an attributable risk. Very soon after the first cases of listeriosis were reported, the link to rockmelons was established, investigations were able to pinpoint the farm relatively quickly and the cause could then be determined."

"It was like a perfect storm scenario where adverse weather [heavy rainfall, followed by dust storms] significantly increased the organic load on the fruit. The melons came in dirtier than normal and impacted on the efficiency of established control measures and sanitising of the fruit. Rockmelons by their very form are difficult to clean and sanitise and the potential for cross contamination in the packing environment is very real."

"Each scenario on their own would not have caused the problem, but they came together and created a perfect storm. For the melon industry it was not a great scenario and caused a major impact, but the cause was identified and the risk attributable to something."



Clare said a frequent response when implementing food safety systems is that “produce has never killed anyone.” “Unfortunately produce now has killed people throughout the world and in quite significant numbers, and it serves as a reminder of the importance of having systems in place to deal with issues that can arise.”

Non-attributable risk

Clare said the recent issue with strawberries was an example of non-attributable risk.

“It was an issue that no one could have foreseen, and it is just as likely other products such as chicken, or even nappies could have been found with this problem.”

“The difference between the melon and strawberry incidents was that while it was not the individual producers or strawberry industry’s fault per se, it was seen as a wider product safety / consumer issue, although one that some considered could potentially have been managed with the right type of systems in place.”

“The government reaction was to look at the supply chain, with knee-jerk comments suggesting metal detectors and tamperproof packaging as solutions. Even with these “solutions” in place, it would not have necessarily managed that particular situation.”

She said it was a different type of risk scenario, where industry could be equally well-prepared and yet face a scenario with something that you did not necessarily have direct control over as an industry.

Unpredictable risk

The last example provided was a left-field scenario of something that simply cannot be predicted and that industry doesn’t see coming.

Clare said an example of the scenario for the mushroom industry was the wild harvesting of mushrooms.

“Every year we have a situation where someone goes to harvest a wild mushroom, and it turns out to be something poisonous, and they end up in hospital. Generally, the headlines don’t talk about the wild mushroom bit; they talk about somewhere in hospital gravely ill from eating mushrooms.”

“From a food safety perspective, the application of common sense is that we wouldn’t be eating those mushrooms in the first place. However, it’s a left-field scenario that can cause serious public relations issues about mushrooms in the wider sense.”



Taking control

The real issue, she said, is that industry can only control, what it can control. It can’t control non-attributable risk, and it certainly can’t control individuals that come under the category of unpredictable risk, so it needs to be well-prepared to provide the right type of information in response to these risks, she said.

“In terms of available mechanisms, we have got facts and science, and we have got the underpinning foundations to tell our side of the story. As an industry, mushrooms are a relatively small group of producers, operating with generally a defined set of circumstances and production regimes. This industry focus can effectively deliver a single story.”

Control Mechanisms

- Foundation ‘facts & science’
- Industry focus
- Individual farm focus

“When it comes to facts and science, there is wide overlap with a range of projects undertaken on behalf of the industry. The key thing is knowledge and information, and the industry has a great history of conducting work to maintain and develop this knowledge.”

Clare said that in each aspect of farm production it was important to understand the unique aspects of the environment in which mushrooms are produced.

“When it comes to farm inputs like chemicals, is about understanding the application of these chemicals and the way they break down in the production environment. It is about understanding these interactions and the potential for inadvertent contamination so that if there is a requirement to draw on this knowledge, the information is there.”

“Regarding microbial interaction, it is about understanding what comes into the process through farm inputs, through the compost, the casing, and the supplements. It is all about potential cross-contamination and understanding the growth and competition of the flora of microbes present in your production systems. If there is a risk in any element, the question is how that risk is managed.”

“From a management perspective, it is about gathering that knowledge, and delivering it through effective training, in providing updated resources, and improved safety management tools. It is about keeping a watching brief, and understanding testing systems that can help provide knowledge of what is happening on-farm.”

Clare encouraged producers to undertake testing through the central industry program overseen by the AMGA.

“The testing done through the central system, with the de-identified results, helps us to create a wider dataset, which can then be used on behalf of the industry to address any issues that may arise. The depth of knowledge gathered over many years is a valuable resource, and I would encourage you to use it whenever possible.”

She said incident tracking was important to understand what has happened – and not much has happened with mushrooms – and to have that information available to make informed statements.

Effective risk management

“Effective risk management is built on facts and real-time access to information through a central coordination approach. Equally as important is having that whole of industry picture, and so recently we have taken the time to undertake an industry survey to understand the uptake of food safety systems in the industry.”

She explained that the respondents ranged from farms supplying just loose bulk mushrooms through to those with minimal processing operations e.g sliced, with up to 80% supplying product through the major retailers.

“When we looked at the systems in place, 50% had some form of HACCP, 36% had Freshcare, 24% had SQF and 8% had no system. We will now follow up those farms with no systems in place and encourage them to move to something.”

“The greatest risk for any industry is the unknown, so those farms with nothing in place are a potential risk to the wider industry.”

Clare explained that a range of work was already underway about information, training and extension delivery to provide an industry-wide scale that can be used as part of any response.

“At an individual farm level, there has to be a system focus, because that is what your customers are asking for, and the biggest drivers of system adoption across fresh produce are the major retailers.

“Many mushroom businesses have embraced and incorporated this systems

The Mushroom Advantage

- A unique product in a unique production environment
- Long and strong history of knowledge gathering
- Targeted R&D programs
- Coordination and collaboration

approach and incorporated it into day-to-day operations through a process of training, implementation and compliance. This approach is delivering embedded food safety outcomes that you can draw upon should any issues arise.”

Clare said by drawing on information and process, in the recent [July 2018] recall for physical contamination in sliced mushrooms, Costas had real-time data to confirm and identify the safe product, and just as importantly identify the product for recall. They had that traceability and the ability to do the recall in a relatively easy fashion, simply because of the systems they had in place.

“From a business perspective, food safety can be considered as your insurance policy, and you need to have it in place. The processes and record

keeping are essential and may be the most valuable thing you have when you need to draw on that information.”

“I would also urge businesses to extend the commitment from the QA manager to the whole team and culture, for unless it is integrated into the day-to-day business, it will not work to its best advantage. Food safety culture can be instilled by making it a component of the things you do throughout your day-to-day business. By making it the norm, it is there when you most need it.”

Clare said mushrooms were a unique product, produced in a unique environment and with a long history of information that can be used to underpin a food safety message and respond, should the unimaginable happen.

“Targeted and coordinated R&D programs can further assist to build additional data. Importantly as an industry, there is a real sense of collaboration, with core projects working with each other to pass on information required for a whole of industry response,” she said.

The importance of knowledge

“In one of the projects completed almost ten years ago, it identified that one of the major retailers had classified mushrooms into the highest risk category. This assessment was based on the “knowledge” from an individual who suggested, “they are grown on excrement.”

“So, by conducting research and working in that project many years ago now, the industry was able to provide evidence on composting process, growing process and all the testing that had been done to effectively manage any risk attributable to inputs.”

“There was a reclassification of mushrooms by the major retailers, and the whole risk level was reduced because there was evidence available to underpin the production process. Consumers don’t want to know about the process until it impacts them and at that point, it is important to have the right evidence available to support the industry claim.”

[Clare Hamilton-Bate]