Food Terrorism: Do We Care?

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Abstract

According to the New Zealand Security Intelligence Service (NZSIS), terrorist elements exist and are active in New Zealand (Smith, 2003). This paper focused on the lack of pre and post-employment security vetting, security concerns around contract manufacturing of food products and exporting finished food products to security sensitive countries. There appeared to be a laissez-faire attitude towards security and this was evident in their processes. This relaxed attitude can be explained using Hofstede’s uncertainty avoidance category (Hofstede, 1984; Peter, 2011; Peter, Losekoot and Poulston, 2013; Adams, 2013a). This exploratory study seeks to raise awareness of the issues outlined and thereby increase efforts to enhance food security in New Zealand.

Keywords: Terrorism, hospitality, food terrorism, security, safety, crisis management

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1. Introduction
It is important to shift gears and break barriers but equally important are security and safety issues relating to hospitality. Producers and suppliers carry the ultimate responsibility to protect their guests, customers and consumers, but what price are we willing to pay to break barriers and shift gears in the race to make yet another dollar?

The objective of this exploratory study was to understand the efforts taken by individual restaurants, food manufacturers, suppliers, wholesalers, retailers, caterers, wine makers etc. to protect against food terrorism. Six hospitality related organisations participated in this study. The intention was to consider the industry’s preparedness.

The targets that terrorist previously focused on such as embassies, military installation and government buildings were spending large amounts of money to fortify their security. They can afford to. The American embassy in Wellington spent $50 million on security enhancement (Schouten, 2013). Given that most embassies, military installations and government buildings are well fortified, terrorists are focussing on ‘softer targets’ such as international hotels and restaurants. This is the main reason why this particular exploratory study is considered significant. Peter (2011) collated a list of about 50 hotels and restaurants that were attacked over a 10 year period.

This research has highlighted some interesting issues like security concerning contract manufacturing of food, and exporting of finished products to highly risk sensitive countries. Contract manufacturing could perhaps mean a loss of control over the production process, while still being ultimately accountable for the finished product and the brand. Since highly risk sensitive countries are fortifying their own security systems; one possible mode of attack would be through food being produced in countries where they are more laissez-faire about security and which are ultimately imported into those countries. It is important for the industry to understand the possible threats and work together with others to mitigate the risk.

The cost of a breach can be very high. Recovering from a food terrorism event will take a long time and the loss to the economy in the meantime will be huge. Aside from the economy, it will also affect the pure and green image of New Zealand. While not quite food terrorism, the recent Fonterra botulism saga demonstrates the potential losses to New Zealand (Barber, 2013; Adams, 2013b)

2. Literature review
Tourism and hospitality is a very crucial industry to New Zealand; valued at $23 billion in 2012. This is significant when compared to the size of the other major industries. Therefore, the need to be alert and protect this thriving industry is paramount. New Zealand trades off its clean, green and pure image which it cannot afford to damage. Food terrorism will not only damage the tourism industry, but also the general economy especially the agriculture and export sectors. Terrorists know that creating uncertainty and chaos will impact on the domestic economy of the targeted country. Once a country is attacked, it will be deemed as an unsafe destination, which will negatively impact inbound tourism numbers. Once a particular country has been attacked, it may perhaps force the citizens of that country to take to the ballot boxes to demonstrate their displeasure of the current foreign policies. That is one of the reasons tourists are targeted. They help further the terrorists cause.
2.1 Various modes of attacks

According to the 2012 country report on terrorism, globally there were 6,771 terrorist incidents which resulted in 11,098 people losing their lives (National Consortium for the Study of Terrorism and Responses to Terrorism, 2013).

There are various modes of attacks that can be used to cripple the hospitality & tourism industry and the economy in general, including food terrorism, suicide bombing and bio-terrorism. Literature around these topics discuss the financial and human resources available for the various missions (Yoon & Shanklin, 2007; Wu, et al., 2009; Palermo, 2006; Atran, 2003; Post, Ali, Henderson, Shanfield, Victoroff, & Weine, 2009). These journal articles explain how each method works and where each method has been successfully utilised. Several documents located post 9/11 demonstrates that Al-Qaeda had instructions regarding food terrorism and was also studying plant and animal dieases (Dalziel, 2009a; Peters, 2003). As access to tradional targets gets harder, terrorists will continue to search for easier and softer targets to attack and hospitality is one such target. According to Khan, Swerdlow and Juranek (2001), the easiest way to release chemical or biological agents would be to poison the food and water supply. While terrorists have put some effort into researching food and bio-terrorism; the hospitality industry as a whole hasn’t made any major attempts to mitigate this risk. Yoon and Shanklin (2007c) confirm that there haven’t been any extensive research into the readiness of the food industry for any food or bio terrorism.

In discussing terrorism in general terms, Howie (2012) confirms a well-known fact that terrorists perform for the media; that witnesses today are able to watch a terrorist event as its occuring (firmly embedded in their minds) and that there is a need to be contantly prepared for a possible terrorist attack.

2.2 Food terrorism

In a 2005 American study based on responses from 4,260 residents, Stinson, Kinsey, Degeneffe and Ghosh (2007), state that 77 per cent of the respondents expect some form of food terrorism to take place within their lifetime. Stinson et al. (2007) further state that respondents would like for 19.13 percent of their anti-terrorism budget to be spent on protecting against food terrorism. This is the highest category compared to the rest such as protecting passenger airlines, power grid, public transportation etc. It demonstrates a keen interest in protecting the food chain. A risk analysis conducted by Mohtadi and Murshid (2009) claims that terrorists events with large number of casualties will increase over time and that there is a great likelihood that terrorist will use chemical, biological or radionuclear (CBRN) methods, moving away from their traditional methods. The analysis also suggests that food will be most likely be the vehicle used in these attacks. Hope (2004) agrees that concerns regarding terrorism is increasing and food can be used by terrorists quite easily, citing the 1984 incident in Oregon by the Rajneesh group.

While the possibility of contaminating food supplies has been researched by various groups, it has not yet been used extensively. Only a few cases have been recorded. Elad (2005) confirms
Bioterrorism had been used in various wars in history. One such group researching food terrorism, according to Sobel, Khan and Swerdlow (2002), is the military, which is constantly looking for weapons for various types of warfare. Pellerin (2000) however claims that there seems to be a reluctance to resort to this method of terrorism (contaminating food supply). Whether food or bio terrorism exists is not the issue. The fact that there is a possibility of this type of terrorism taking place should be sufficient for the affected economies and industries to prepare themselves. Yoon and Shanklin (2007a) argue that the only way to address the issue of bio and food terrorism is to look at early detection and prevention of such attacks. In order for this to happen, food handlers, manufacturers etc. must be involved in the process. World Health Organisation (2008) reiterates that in order to counter food terrorism, a strong surveillance system and a good response system in the event of an attack, is needed. Bledsoe and Rasco (2002) claim that while the events of 9/11 grabbed the world’s attention, it is the threat of future terrorists acts that is worrying. They argue that there are various reasons for acts of terror, ranging from economic (financially paralysing an industry) to political (getting their message out there and impacting on elections outcomes). Bruemmer (2003) explains that food is a good choice for terrorist to attack because of its symbolism. Food represents security and comfort, which are the actual targets. It is possible to use food, a common commodity, to cause fatalities but more than that, it creates uncertainty and fear. Consumers will not know which food products are safe to consume. If terrorists are able to infiltrate and deliberately contaminate food supply, it will demonstrate the weakness of the authorities despite all the resources they have at their disposal. This will create mistrust in the authorities and government.

Bioterrorism and by extension, food terrorism are relatively easy targets. Polimeni (2007) goes a step further, calling it an attractive target. According to a statement by Dyckman (2003), terrorists will only attack food supplies if they want to disrupt the economy but if they were instead interested in causing chaos, harm and fatalities, then food terrorism will be their best option.

The federal or local government alone is not solely responsible to protect against terrorism. The issues surrounding terrorism are varied and complex. According to the World Health Organisation (2008), private and public sector organisations cannot ignore the possibilities of food terrorism. Petersen (2008) argues that private companies should also take ownership and contribute towards anti-terrorism efforts. In this case, organisations involved in food preparation should realise that they are the last line of defence (Yoon & Shanklin, 2007b). Robertson (1999) acknowledges and states that while food terrorism is not common, the need to be prepared is essential.

One of the most common toxins used in food terrorism is ricin. Shea and Gottron (2013) provide an insight into this very potent toxin. While research is continuing for an anti-dote for ricin; nothing exists to date. The authors explain in their article where and how ricin can be obtained and how it will affect the consumer or anyone exposed to it. They also provide a list of where ricin has been ‘successfully used’. A couple of the other possible toxins are arsenic and anthrax.

Not all food is produced by the companies that initially developed or created it. Increasingly, for economic reasons, the manufacturing role is being transferred to contractors. These food items are produced and consumed locally and in some case also exported. Starbird and Amanor-Boadu (2007) discuss contracting and in particular they discuss food safety and food traceability i.e. understanding the supply chain process of
any given item. They state that this aids recall of products if there is a need. Dalziel (2009) quotes a World Health Organisation report which states that a while an incident or breach may occur in one location, it could have a wider effect globally.

2.3 Cost and recovery

The possibility of deliberately contaminating food is very real. Cases mentioned in Branigan (2013) and Harris (2013) may not be classified as terrorist acts but they demonstrate how easy it will be for such an attack to take place. They are not accidental food poisoning but instead deliberate criminal acts.

According to Hall, Norwood, Fulleton, Gifford and Ursano (2004), the burden caused by an attack on the food chain can be very costly to any community or country. There will be a huge psychological impact and the recovery could take some time. Hall et al. (2004) argue that it is easy to understand this impact by studying the Severe Acute Respiratory Syndrome (SARS) and anthrax attacks in the United States and the sarin gas attacks in Japan. In describing the foot and mouth disease outbreak in the United Kingdom and its impact, Ritchie, Dorrell, Miller and Miller (2003) explain that the path to recovery is long and costly and that relevant agencies should have strategies in place in the event of a breach. Ritchie et al. (2003) also state that the recovery effort and other marketing activities to resell the destination be best left till after the situation has returned to some form of normalcy else the effort will be wasted.

3. Methodology

This qualitative exploratory study adopted an interpretivist approach. Fay (1996) states that interpretivism is about searching for a meaning or an explanation of a subject or topic. Fay claims that ‘to comprehend others is to understand the meaning of what they do, and that to understand this meaning is to understand them simply in their own terms’ (Fay, 1996, p.113). Interpretivism is about building a story and not about testing a theory according to Williams (2003). It is flexible; it does not have any ‘fixed measures, indicators or values’. (Williams, 2003, p. 58). For this study we had to try and understand how food manufacturers and operators proposed to protect the end consumer against food terrorism. We needed to understand the various safeguards and measures that were being taken and their motivation for taking them.

Data was collected using the semi-structured interview method along with direct observation. Semi-structured as the name implies, is not rigid and has a built in flexibility. It allows the interviewer to probe further if a particular response is found to be significant.

For this study we initially set out to identify 10 participants across several areas of hospitality such as food manufacturers, wine makers, restaurants, caterers and hotels to name a few. This was representative of the industry we had planned to study and the literature around food terrorism pointed to these areas.

We made a list of some prominent businesses in the area and made initial contact, explaining the study and what we hoped to achieve. The organisations on the list were of a reasonable size meaning they employed or contracted at least a few staff to assist
with the business. We were not interested in small businesses that did not employ anyone. Companies of that size would defeat the purpose of the study. A sole operator was more likely to be a micro business and they would be able to monitor their security very closely. Also their production quantity would be too small to cause any major damage to the industry or economy. So the criteria used to select the participants were:

1. type of hospitality industry (manufacturing, restaurant, caterer etc)
2. size of the business (production size)
3. number of staff or contractors (five or more)

Potential participants were contacted by telephone and/or email. The study and its intent was described to them without revealing the actual questions to avoid any chance of them participants preparing themselves. Eventually six participants agreed to being included in the study. Separate meetings were arranged for each one of them. They were to last approximately an hour each. Some of the participants were located quite a distance away and as such only one interview could be conducted per day. Travel time to some of the participants was about two hours in each direction. The interviews itself were approximately one hour each. These sessions were recorded and later transcribed with the participants expressed knowledge and permission.

A standard set of 21 indicative questions were prepared for the interviews. These questions were decided upon after studying the literature around the subject. The literature identified research gaps and interest in particular areas. The 21 questions were merely a starting point. ‘Conversations’ in many instances took a different turn depending on the responses from participants. That was the purpose of using semi-structured interviews. Sometimes, these turns in the conversation can lead to better, more meaningful outputs.

4. Results, analysis and discussion

4.1 General

The main issues that have come out of this exploratory study are the:
- lack of vetting of staff pre-employment and regularly during their employment tenure
- high use of casual and part-time staff
- lack of policies or manuals to address or provide guidance for food security
- issues surrounding contract manufacturing
- issues surrounding exporting to highly security sensitive countries

Most of the participants believed that food terrorism is a possibility and that New Zealand as a whole should acknowledge the possibilities and tightened up their processes. Currently, no organisation or government body is leading the issue. Participants have maintained that they have not been made to attend any mandatory course where food terrorism has been discussed. They also do not possess any manual or policies to prevent food terrorism entering their production process or even to guide
them in the event of a breach.

4.2 Security vetting

Peter (2011) discussed extensively, the issue of security vetting staff and suppliers. The hospitality industry does not vet their staff and suppliers as much as they perhaps should. The industry uses a high percentage of casual staff and yet these temporary employees are rarely security vetted.

Security vetting by contract manufacturers will be discussed under a separate heading. Here we are looking at the responses from brand owners who are in charge of their own production. When asked whether they vetted their staff prior to employment, these were their responses:

No...sometimes. Depending where they come from and if we have any doubts with regards to their criminal history. Where they come from meaning if they were to come through Work & Income NZ ... and a lot of it will come down to the character of the person (P2).

For the waiting staff we do. For the other staff we don’t because they come from the same place (in China) as the owners and they know each other for a while (P5).

So it is evident from these sample responses that security vetting of staff pre-employment is not treated as mandatory or a standard policy. Instead it depends on relationships and what the interviewer is able to ascertain at the interview. The responses were similar when asked if they security vetted their staff during their tenure of employment. Staff who were cleared during the pre-employment stage may not enjoy the same security clearance a few months or years on. To safeguard the production process, staff should perhaps be vetted pre-employment and regularly during their employment tenure.

When asked if they security vetted their suppliers, these were their responses:

Security vetting – probably no because they are a certified business (P1).

In the sense ... because we have a food safety programme, all the suppliers themselves have to have a food safety programme. Got to have traceability on the product. Some of the companies are better than others (P2).

No. we always get our supplies from registered businesses. So I think it’s like a guarantee of safety (P5).

From the above responses, you can deduce that vetting of suppliers is not a high priority. As long as they are registered businesses, the assumption was that they were safe. There weren’t any issues about whether these companies were vetting their own staff.
4.3 Contract manufacturing

Either a part of the production process or the entire manufacturing is contracted to other companies. This has become a normal method of production. It is no longer viable for small and medium producers to purchase expensive equipment and try and manufacture on their own. It is much easier to find other manufacturers who often have spare capacity and are happy to fill in those gaps by contracting their services out. That is how they keep their staff and themselves fully employed.

The main issue of contracting out the manufacturing is the loss of control. The brand owner will not be privy to the daily operations and yet somehow, they will be held accountable should the final products hurt the end consumer. The contractor will be liable as well but the damage to the brand will be something that will not be easy to recover from.

Two participants from this study contracted out their manufacturing to various organisations. They had to trust their manufacturers completely while not being fully aware of the operational situation. When asked how many staff they had, this was their response:

No staff. We have people that we contract for various roles depending on what we need (P3).

Everything is contracted. So our picking is contracted. Our spraying program is contracted. Our pressing is contracted. The bottling is contracted. So we work with quite a few contractors. Companies contract themselves to us. We don’t have people reporting directly to us. We don’t need to. It’s a seasonal business. If we had people working for us, we really wouldn’t have enough work to give to them. Which is why we contract out everything (P6).

While they may be involved to varying degrees in the production process, P3 and P6 do not completely manufacture the product themselves. They leave it to their contractors. They will not know the exact number of staff or much about the individual staff’s background. When asked if they knew if their contractors’ security vetted their staff, P6 was unable to confirm and P3 had this to say:

I don’t (know). I feel reasonably comfortable in making the assumption that they are because I know the guy who runs it, runs a pretty tight ship. Out of all the places we looked at for contract manufacturing, this guy has the most robust processes I’ve seen from a food safety side. That would lead me to believe that he is quite sussed on the other side (food security) (P3).

So, it is important to note that while contracting is a useful way to get the products manufactured cheaply, there are still some issues that need to be addressed with regards to security.

4.4 Exporting
This study has raised the interesting question regarding exporting especially to highly security sensitive countries. These countries may be difficult for terrorists to attack from within due to their high security and vigilance. However, attacking a softer target country that regularly exports their finished products would be a more effective option.

While they do not conduct any regular laboratory tests for local consumption, nor are they required to, participant P4 said that they only submit their produce for laboratory testing if the product is meant for export. This was the reply by P4 when asked about post-production checks for deliberate contamination:

\[\text{No. If we export, it gets (lab) tested. We can't export wine without it being tested and we also get randomly sampled. They can also take samples off the shelves locally and those will be analysed by the government department appropriately (P4).}\]

No mention was made about the actual tests and what the product is being tested for. Also according to P4, while the products can be randomly tested by the local authorities, there isn’t a mandatory requirement for them to avail samples of all their produce for laboratory testing. P4 also mentioned that in order to export to America they are required to have indemnity insurance.

\[\text{I would say that we have a very big public indemnity insurance for the US. Wine going to the US is $5 million insurance (P4).}\]

Whether other countries practice this same requirement (indemnity insurance) is unknown and whether $5 million indemnity insurance is a sufficient deterrent is unknown.

### 4.5 Prediction, Preparation and Prevention

The industry should perhaps consider a path that will protect them against harm and financial loss. It is important not only to do something, but also to be seen doing it. So it is advisable for the industry to engage in activities that demonstrates these actions (Figure 1). At the prediction stage, there should perhaps be research being carried out by the individual manufacturer around food security because they know their products and markets best. Also the industry as a whole should be conducting some general research. They should also be using any security
intelligence they have access to. This will produce some forecasts as to what they can expect in the near future; which will shape their overall decisions around food security. Preparation is about educating the public about purchasing only fully tested products that are packed into tamper-resistant packaging. It should be the stage where training is provided to the food manufacturer as to what checks should be conducted. At this stage the value of testing and cost of testing should be addressed. Finally, in the prevention stage, pre-production and post-production testing should be carried out and this should be embedded into the culture of the organisation as the new norm. Products should not be allowed to leave the factory until proper testing has been carried out. Most of this must be initiated and driven by the government and the cost built in, so that manufacturers are not financially disadvantaged.

5. Limitations and opportunities for further research
The main purpose of this exploratory study was to find out what the industry was doing in terms of food security and terrorism. They seem very well prepared and knowledgeable with regards to food hygiene. In fact, they seem to think the planning, requirements and policies were interchangeable. The main limitation would be the sample size. A much larger study needs to be carried out in order to come to any conclusion with a high confidence level. But this study shows that the topic is definitely worth studying.

Any further study should perhaps focus on three areas: security vetting for staff and suppliers, contract manufacturing and production for export. The latter two topics were unexpected findings that had come out of this study but ones that warrant a more in depth study on a larger scale. Perhaps a quantitative study along with a qualitative approach might also be useful. With high labour cost and rent, smaller producers will turn to contract manufacturers with spare capacity. On the other hand, contract manufacturers are looking for these opportunities to be used as fillers during their slow periods to minimise any downtime. So, this phenomenon makes it an important area to study.

6. Conclusions and implications
This exploratory study started off to study the current situation i.e. what the hospitality industry was doing in terms of protecting against food terrorism. Literature around this topic was consulted and reviewed. They point out the possibility of terrorist acts involving food, while acknowledging to date there have not been any significant attempts. Still in some countries, residents believe in its possibility. Stinson et al. (2007) clearly explained the desire by Americans to use a large portion of their budget to protect against food terrorism because they believed that it would happen in their lifetime.

Here in New Zealand, there seems to be, in some cases, a more relaxed, lassissez faire attitude towards terrorism. This finding is similar to what was described in Peter (2011) which studied the attitudes towards terrorism. From an academic perspective, this can be explained using Hofstede (1984) which studied uncertainty avoidance where some cultures are more inclined to accept a certain degree of risk.

When participants were asked if they believed that there was a possibility of food terrorism in
New Zealand, some thought it was but a couple had this to say:

Well that’s a difficult question also. Yes, of course there is a possibility because the ability to tamper with products is there. That’s evident. Whether it’s likely to happen and whether it’s a risk that I take seriously ... then no. I don’t think so. I can’t see what agenda could be satisfied by acting in that way here in New Zealand. But that might just glaringly reveal my naivety (P3)

When asked whether New Zealand needed to protect itself against food terrorism, most thought that we should but a few weren’t so sure. One response, believed our location was our safety net:

I don’t know if in New Zealand we need to, but in some countries around the world (need to). I don’t think we do here in the sense that we are sort of isolated. But if you were supplying into United States, which is a high prime target ...then hitting somewhere soft like us would be (P2).

New Zealand Security Intelligence Service (NZSIS) was quoted in a report by Smith (2003) as terrorists being already established in New Zealand. The statement by NZSIS, which is appended below clearly demonstrates that terrorists elements are already present in New Zealand. So it is not such a far-fetched notion to assume that food terrorism could potentially occur in New Zealand and therefore there is a need to prepare against such acts.

There are individuals and groups in New Zealand with links to overseas organisations that are committed to acts of terrorism, violence and intimidation. Some have developed local structures that are dedicated to the support of their overseas parent bodies. There are also isolated extremists in New Zealand who advocate using violence to impress on others their own political, ethnic or religious viewpoint (NZSIS).

In conclusion, participant P3 had this to say, which is an appropriate quote for this study:

They (authorities) are terrified of mould but not somebody with an actual agenda. So, I find that surprising (P3).
Reference


