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**Prevention and Response to Intentional Contamination**  
*(Prepared by Canada)*

**BACKGROUND**

Sporadic incidents of threats of tampering and intentional contamination of food products occur throughout the world. The vulnerability of the public to such acts has been demonstrated on several occasions. For example, recently, a group of school students poisoned a batch of soup, sending more than 100 of their classmates to hospital with headaches, vomiting and diarrhoea. Also recently, an individual was charged with extortion and tampering with consumer products for sending several adulterated food items, including baby formula contaminated with boric acid, to a grocery chain and demanding money to prevent poisoned food from being placed on store shelves. Even the public allegation of tampering can cause public concern as evidenced several years ago when there were several instances of alleged tampering of turkey with cyanide. This resulted in extensive investigations, product recalls and public advisories.

Tampering is defined as intentionally altering a product, its container or label with the intent to harm. In Canada, product tampering may be prosecuted as an offence under the Criminal Code of Canada. The Code does not contain specific provisions that relate directly to product tampering, however sections such as public mischief, uttering threats, and extortion may apply.

**Intentional Contamination**

The intentional contamination of food poses significant challenges to regulators, food manufacturers, producers and distributors. There is potential for vulnerabilities at each stage of the food continuum. At the farm production level, for instance, given the frequent use of transient labour for harvest, it is not practical to do background checks on these workers. In addition, there are regular deliveries of large amounts of feed to livestock operations, and there are often visitors and other traffic that could introduce disease or other agents. At the manufacturing level, many processing facilities do not have sufficient security. For example, access to transport vehicles and the buildings may not be adequately controlled and visitors are not always easily identified or closely monitored. At the retail level, open displays of produce, and self serve ready-to-eat foods are also vulnerable to intentional contamination. The detection of intentional contamination is further hindered when perpetrators choose to use contaminants not routinely tested for in food, thus preventing detection during routine surveillance.

## Emergency Management

Emergency management is often invoked when intentional contamination of food occurs, especially when there is large scale contamination. It is generally accepted that there are four elements of emergency management: *prevention*, preventing an emergency from happening or reducing the risk associated with an emergency situation; *preparedness*, developing effective policies, procedures and plans for managing emergencies; *response*, actions taken immediately before, during or directly after an emergency occurs; and *recovery*, efforts taken to repair and restore after an emergency. This paper will only address the first three elements: prevention, preparedness and response.

Emergencies are inevitable: the question is not "if" but rather "when" will an emergency occur. There is no doubt that emergencies are very demanding, and require additional resources and support; however, they can be managed successfully. A crisis is likely to develop if an emergency is mismanaged.

## Prevention

Preventing an emergency from happening or reducing the impact associated with an emergency situation is part of the regular day-to-day operations in the Canadian Food Inspection Agency (CFIA). Prevention activities include the establishment of standards and enforcement approaches to control the entry into Canada as well as the domestic spread of potential hazards in food; providing consumers with rapid information and answers when foods are found to be unsafe; food safety inspection activities to identify contaminated products; carrying out border activities (inspection, audit and testing) on imported goods to detect and manage diseases within Canada's borders; gathering international intelligence on hazards to alert CFIA officials to new potential threats; and, with partners such as Health Canada and provincial colleagues, conducting survey and surveillance activities in a number of key domestic and import areas to reduce the risk of potential hazards. These efforts to prevent emergencies are the first steps in reducing the impacts of identified hazards including the intentional contamination of food.

Responsibility for the prevention of incidents of contamination of food is shared amongst all levels of government, industry and consumers. No one group can accomplish this alone. One of the most practical solutions to this problem is to take a layered approach to food defence. These layers utilize a combination of traditional food safety activities in combination with security measures.



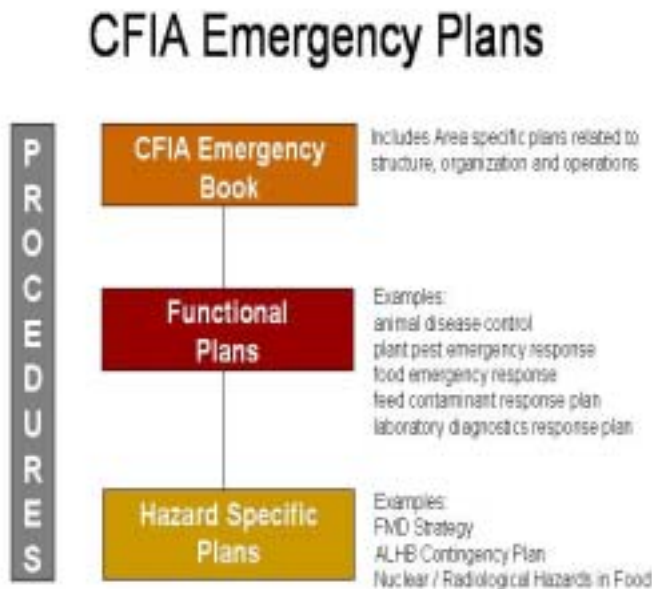
Sound science lays the foundation for the prevention of both intentional and non intentional food contamination. With sound science, regulators, producers and processors obtain a good understanding of food systems, the possible contaminants and potential paths for contamination to occur. Layered on top of sound science is a robust food safety program that may include Hazard Analysis Critical Control Point (HACCP) Systems or Good Manufacturing Practices (GMPs) used in industry in combination with risk-based surveillance and monitoring programs administered by government. These systems will assist in the deterrence of

intentional contaminations as well as provide the basis for an early warning system in the case of an incident. Food safety programs, however, were not designed to safeguard against malicious intent.

Therefore, the final layer is security, which will most likely occur at the producer, manufacturer and distributor level. Included in this layer are enhancements of: physical security such as video surveillance, protection of the water supply, and smart access cards for employees; personnel security including background checks, and monitored movements of employees and visitors; and finally a review of operations to identify potential vulnerabilities in the existing system and develop procedures to address them. This review should also include emergency plans, emergency contact numbers and detailed communication plans.

## Preparedness

It is important to remember that emergencies attract increased requests for information and require increased resources for communication. Initially, there is often insufficient information. As the event escalates, there will likely be too much information coming from all directions. Unfortunately, much of the information can be conflicting, especially in the case of a multi jurisdictional event. Strong communication plans are essential for managing emergencies, especially with those involving the intentional contamination of food and the potential for panic by the public.



In Canada, the *Emergency Preparedness Act* mandates to the CFIA the lead role in preparing for and responding to emergencies involving food safety, animal health, plant protection or any of its programs. The agency is responsible for preparing emergency plans and developing effective response capabilities for such emergencies. A series of plans have been developed starting with the CFIA Emergency Book, nested under this is the Functional Food Safety Emergency Plan, followed by hazard specific plans and procedures.

To be effective, emergency plans must be tested, and therefore, preparedness involves exercising these plans. The federal government is constantly preparing to respond rapidly and effectively to emergencies that impact on the agriculture and food sectors, whether the event is caused accidentally or intentionally. Exercising plans exposes weaknesses, and allows planners to make improvements of the plans. The CFIA exercises plans regularly inviting the participation of both industry and governmental colleagues.

## **Response**

Response is the mobilization of staff and resources and the potential implementation of emergency plans to provide immediate action to mitigate the effects of a harmful situation. The CFIA has two groups that are involved in managing an emergency situation: the National Emergency Response Team (NERT) located in national headquarters and the Area Emergency Response Team (AERT) set up and located in the affected area. The role of the NERT is to manage the expedient resolution of the emergency at the national level. The team implements the appropriate functional or hazard specific emergency plans. The role of the AERT is to manage the expedient resolution of the emergency at the area level. The team implements the appropriate plans as well as policies and procedures drafted on an ad hoc basis by the NERT. The AERT reports to the NERT.

Response activities include: risk assessment, which in Canada is done by Health Canada; risk management which are actions taken to mitigate the risk; communicating both internally and externally with consumers and food safety colleagues; laboratory analysis; the provision of program, legal and scientific advice; arranging funding for response activities; the facilitation of inter-organizational coordination; the coordination of staff recruitment where needed and the provision of full logistical support to the emergency operations centre(s) in both Headquarters and the Area.

In the case of intentional contamination of food, the element of criminal intent poses an additional challenge to the response process. While it is important to take appropriate food safety measures to mitigate the risk, responders must also consider the potential of evidence for the purpose of prosecution. When there is criminal intent, the response should include, at the onset, coordination with the constabulary. Inspectors should be well trained in the processes of collecting and maintaining the continuity of evidence.

## **Lessons Learned**

- The prevention of, and response to an intentional contamination event is not the sole responsibility of regulators. To be most effective, the effort must be shared amongst regulators, the industry and consumers in a multi-level approach.
- Robust security at the production, manufacturing and distributing levels will also aid in deterrence.
- Good planning and well-established channels of communication and cooperation among all parties concerned will aid in the response to an event and minimize the impact of such an event such as the intentional contamination of food.
- Emergencies are very demanding, and require additional resources and support; however, they can be managed successfully.