

# Keeping you safe!

This column aims to provide hazmat/ CBRNE community with operational guidance on the selection and performance of equipment and tactics. In this issue, we focus on Agroterrorism.

The FBI defines agroterrorism as the deliberate introduction of an animal or plant disease for the purpose of generating fear, causing economic loss, or undermining social stability. Such outbreaks may be indistinguishable from natural ones, and may spread nationally and internationally before they are recognised. Why is agroterrorism so important? An attack on our food supply causing illnesses and deaths has the potential to destabilise global economies, disrupt supply chains, and lead to distrust of the food system and society. The secondary effects include political instability and impacts on responder and military readiness. In the first two weeks of June 2025, the US saw three high profile cases where customs intercepted agricultural threats.



Historically, several cases of agroterrorism have been confirmed. One example occurred in 1952 when the Mau Mau in Kenya intentionally poisoned cattle with toxins from the African milk bush plant. In 1995, the white supremacist, Larry W Harris, acquired freeze dried bubonic plague by mail order. It was confiscated at his residence in Lancaster, OH. While it was not viable, Harris was also found to have homemade explosives, triggers and fuses on hand. These incidents should always be considered poly-threat events and the presence of other hazards cannot be ignored. The 2011 threat to intentionally release foot-and-mouth disease (FMD) in the US and UK resulted in a conviction for terrorist activity and money laundering although the individual did not have any FMD.

Unfortunately, without an explicit confession, material confiscations or a recorded threat, agroterrorism offences are often difficult to prove as many of the materials occur naturally. For example, there is insufficient evidence to support either the 1985 alleged spread of screwworm in sheep by Mexican contract workers or the 2000 alleged intentional contamination of Palestinian agricultural land.

### Select agents

Each country or region identifies select agents and toxins of high interest that can impact its agriculture sector. In the US, the departments of health and human services and of agriculture update a list of select agents and toxins every two years, that includes 63 agents across a broad spectrum of veterinary and plant agents and toxins. Classic examples include FMD, avian influenza, and Newcastle disease, which affects poultry and other birds.

### Indicators and warnings

Agricultural areas are high risk 'soft' targets as they tend to be geographically and operationally concentrated and to have long term, insecure storage locations. Like most biological events, agroterrorism is more likely to be determined from event indicators like:

- Presence of unusual diseases, especially those not endemic to the region.
- Illness or death of plants or animals not related to geographic or seasonal climatic conditions.
- Higher than expected morbidity and mortality from common diseases and/or failure to respond to traditional therapeutics.

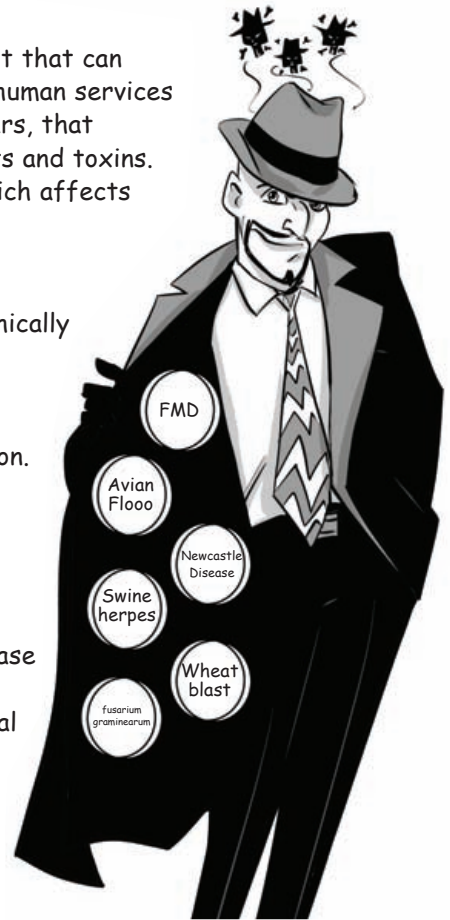
Such events require intelligence sharing across many agencies, and disease outbreak tracing. This includes retrospective studies to determine the source of the incident or outbreak using a combination of epidemiological studies, routine testing, environmental monitoring, etc. There may also be a human component to tracing outbreaks of diseases.

Alternatively, overt indicators include groups of individuals purchasing, stealing, or smuggling agricultural pathogens; unusual spraying activity; or general suspicious activity near agricultural areas of concern.

Preplanning is essential to ensure a coordinated local, national and international response. Planning activities should involve subject matter experts (SMEs) and representatives from the agricultural industry and supply chain. The activities include identifying and understanding the threat and threat agents, intelligence sharing, response arrangements, and identifying resources required along with the priorities for their use, access to SMEs as well as training and exercising for all responders. Preplanning also needs to consider supply chain disruptions and how they are managed. Some of these elements may take many months to resolve and require significant resources from areas we may not normally associate with a response, such as bulldozers or vehicle decontamination systems.

### A case study

The release of an agricultural threat affecting plants or animals has the potential to create unprecedented economic damage and public panic. If that threat can also infect humans, this escalates quickly. The largest outbreak of bovine spongiform encephalopathy (BSE), also known as mad cow disease, began in the UK in 1986. While this was not the result of agroterrorism, the results were telling. The fatal neurological disease resulted in the confirmed infection of under 200,000 cows and the preventative slaughter of over 4.5 million. The new fatal variant in humans, variant Creutzfeldt-Jakob disease (vCJD), resulted in 232 deaths, however, the outbreak caused many more fatalities as suicides among farmers increased significantly.



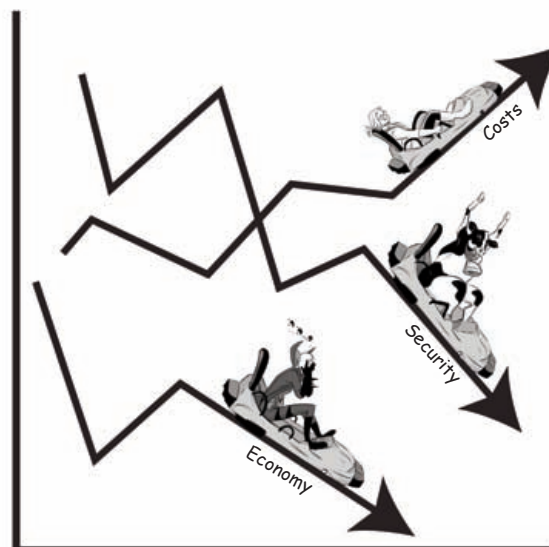


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The outbreak went international with confirmed cases in at least 24 countries including Ireland (1989), Switzerland (1990), Portugal (1990), Japan (2001), Canada (2003), and the US (2003). International efforts, such as banning animal products in feed to control and eradicate BSE are working as the rate of infection is now less than one case per million cattle worldwide. The initial economic impact from this outbreak was \$4.6bn in the UK, however the long-term impact is immeasurable as it was 2020 before the US lifted its ban on British beef.

## Response

It is important to remember that the effects of an agroterrorism event will be broad-reaching across all sectors of society, making significant impacts on the economy, public health and national security, while also creating fear, panic and overall social disruption. The economic impact is not just the matter of the direct costs of crop or livestock destruction but also includes indirect costs associated with food processing, transportation and availability as well as international trade disruptions. Public health impacts will span the food safety, animal health, and human health sectors. National security impacts affect military readiness, economic destabilisation, and the erosion of public trust. Finally, the social impacts of increased fear and panic along with food shortages and price hikes can create unrest.



Response may be local, state/regional, national or even international. A coordinated national response must identify, isolate, and contain distribution of the source; identify and protect the population at risk; assess the extent of contamination; and decontaminate or dispose of affected materials. The resource demands for PPE, neutralising agents, disease outbreak control teams, veterinarians, and decontamination equipment may be significant for an extended period.

Responders should build partnerships with other response agencies and train to understand the threat, including infection control for personnel and resources like vehicles, to minimise their potential to be contaminated and accidentally spread the outbreak.

Large areas may be under quarantine, and this may affect your responses and service delivery including access to your personnel, or resupply. These factors also need to be considered in preplanning.

Exercising and practicing the arrangements and responses, assigning responsibilities for each process, and practicing the implementation will be critical for achieving a successful outcome to an agroterrorism event.



Images are courtesy of Phil Buckenham <https://philbuckenhamart.wixsite.com/philbuckenham>