



Cyclone Gabrielle – Risks associated with contaminated animal feed post flood

Background

¹After a flood event, it is important to give quality feed to livestock in areas impacted by flooding. Availability of feed following such an event may be limited and water damaged fodder may need to be fed. In such situations, owners must be aware that animal feed contaminated with flood waters can present animal health risks. Animal feed may have been submerged in flood water that could contain sewage, bacteria and other pathogens, pesticides, chemical contamination, and other toxins that may contaminate crops and stored feed².

Moulds can develop easily on water-damaged crops, hay and silage. Some of these moulds can produce mycotoxins which can be toxic to both animals and people

Risks

There have been incidents involving the spontaneous combustion of animal feed products including palm kernel meal (PKM), palm kernel expeller (PKE) and hay. These products can pose a risk to the health and safety of both humans and animals if they have been inundated with water. Particularly for feed at the bottom of storage for prolonged periods, which carries a high risk of spontaneous combustion (self-ignition), or of collapsing under the pressure of stored feed above it as the bottom starts to rot³.

Only attempt to move contaminated hay or PKE when:

- there is good access to the hay or PKE
- the correct equipment is available
- a suitable alternative dry site is available.

Animal poisoning can occur as a result of consumption of plant, fungal and toxic element contamination.

Overseas examples have indicated that there are a number of potential contaminants associated with consuming feed impacted by flood waters⁴ such as:

- Silt contamination
- Mycotoxins, including aflatoxin, fumonisin, vomitoxin, zearalonone, and ochratoxin
- Heavy metals, specifically cadmium, mercury, and lead
- Certain pathogenic bacteria and their toxins, such as Salmonella, E. coli, and Clostridial infections
- Chemicals, such as pesticides.

In some cases, contaminated feed can be obvious i.e. the visible presence of mould. Owners may try to salvage unaffected portions of feed. However, it is worth noting that not all contaminants can be seen and exposure to contaminated feed still presents potential animal health risks

¹ Animal feed: hay, silage, lucerne, feed crops (including crops sown for human consumption but subsequently fed to animals) or other grazed or conserved forages and other supplementary feeds including manufacturing feed

² <https://www.fda.gov/food/food-safety-during-emergencies/safety-food-and-animal-food-crops-affected-hurricanes-flooding-and-power-outages#general> Feeding livestock water-damaged fodder | Livestock health and welfare | Livestock and animals | Agriculture Victoria; [SpecificRisk-Fire-PalmKernel.pdf \(vero.co.nz\)](#); [Animal Feed Spontaneous Combustion Risk Management Notes AFS RMN 1119.pdf](#)

³ Feeding livestock water-damaged fodder | Livestock health and welfare | Livestock and animals | Agriculture Victoria; [SpecificRisk-Fire-PalmKernel.pdf \(vero.co.nz\)](#); [Animal Feed Spontaneous Combustion Risk Management Notes AFS RMN 1119.pdf](#)

⁴ Crops Harvested from Flooded Fields Intended for Animal Food: Questions and Answers | FDA



Clinical signs

Toxicity in animals can present in a number of ways depending on the contaminant, such as:

- weight loss and poor appetite
- photosensitisation
- enlargement of the abdomen
- liver damage
- reproductive issues
- neurological symptoms
- sudden death.

Contaminants found in animal feed, can be broad, and indications of toxicity can vary depending on the contaminant. A comprehensive list of contaminants of animal feed in New Zealand and potential animal health indicators can be found at <https://www.mpi.govt.nz/dmsdocument/41142/direct>.

Guidance for harvesting flood-affected produce for human consumption is available at <https://www.mpi.govt.nz/dmsdocument/55618-Guidance-for-harvesting-flood-affected-produce-for-human-consumption-15-February-2023>.

Mitigation factors⁵

- Minimise access to contaminated feed if possible
- Don't feed baleage or silage showing signs of mould
- Remove the contaminated feed suspected of causing toxicity as soon as possible and give a good quality replacement.
- If potential toxicity is a concern, contact your veterinarian to see if testing of contaminated feed is available.

MPI and Federated Farmers have restarted the national Feed Coordination Service to support farmers recovering from the cyclone. The service helps match people with grazing or supplementary feed for sale to those who need it.

To offer or request feed or grazing, freephone **0800 FARMING (0800 32 76 46)**.

⁵ <https://agriculture.vic.gov.au/livestock-and-animals/livestock-health-and-welfare/feeding-livestock-waterdamaged-fodder>

