

# Animal health problems following floods and drought-breaking rains

## Belinda Walker

Senior Regional Animal Health Manager, Animal & Plant Biosecurity, Gunnedah

During drought, infectious disease tends to be less common and the majority of animal health problems are related to incorrect feeding, inadequate or unbalanced nutrition. The wet season that usually follows can bring with it a much wider ranging set of problems. Producers need to be aware of these to help minimise losses.

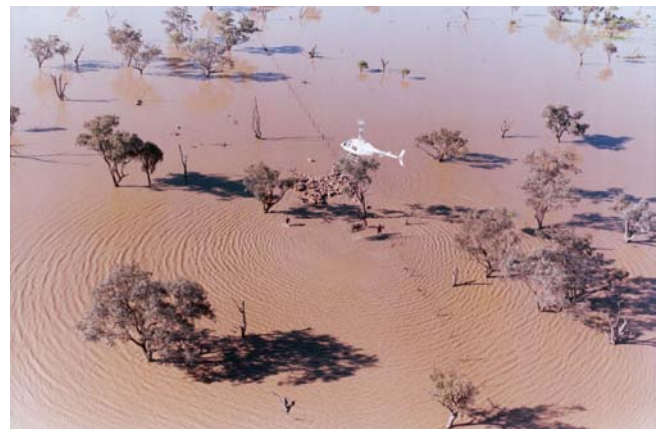
## Flood

During a flood the welfare of animals is the immediate concern, and nutrition is once again the critical factor. Getting feed to stranded animals is an emergency, particularly when they have had to swim to save themselves, and have expended a huge amount of energy doing so. Many of these animals will have no reserves left, and pregnant animals in particular will quickly develop metabolic problems and die if not fed.

Good quality hay is the preferred feed, as digestion of roughage generates heat that will help to keep the animals warm, particularly if they are still standing in water. Hypothermia (low body temperature) can develop rapidly in stock standing in water, even in summer. Every effort should be made to drive or otherwise remove stock to an area that is high and dry. (More detail can be found in the ['Flood Operating Plan'](#).)

Paradoxically, stock may refuse to drink flood water, if it is polluted or tastes substantially different from their normal supply (e.g. if they are accustomed to bore water). When stranded cattle are being fed, they should be observed to make sure that they are drinking.

If stock are likely to be stranded in water for some time and so cannot be effectively fed, euthanasia should be considered.



*Sheep being rescued by being placed in a crate below a helicopter. These sheep would chill rapidly and die if left standing in water.*



As the flood recedes, it may be some time before things return to normal, as there are many other animal health problems that are likely to emerge in a very wet environment.

Producers also need to start planning immediately for how they will feed their stock in the months to come if pasture or crop normally relied on for this purpose has been ruined by flooding.

## Disease in a wet environment

When the drought breaks in an area, particularly if you have been hand-feeding for months, the temptation may be to heave a sigh of relief now that feed is available, and take a break from overseeing your stock constantly. This is not wise, as stock need to be checked frequently to detect any developing disease problems, particularly if they are in a weakened condition from previous drought.

## Insect and arthropod problems

A very wet season (with or without a flood) is likely to result in larger than usual insect and arthropod (e.g. tick) populations. Problems due to increased insect activity are likely to become widespread, particularly if preceding seasons have been dry, resulting in limited exposure and low levels of immunity to insect-borne viruses.

Diseases such as Akabane virus or ephemeral fever (three-day sickness) may occur in areas where they have not been seen in the past few years.

- In coastal country, tick paralysis in calves could be worse than usual, due to high numbers of ticks.
- Other ticks could cause anaemia and irritation, resulting in loss of condition.
- The blood parasite *Theileria buffeli*, which is carried by ticks, may also cause significant anaemia when tick numbers are high.
- Fly worry, including buffalo fly on the coast may also cause loss of condition.
- Fly strike is likely to occur in sheep.

## Bacterial disease

Most bacteria thrive and multiply in a moist environment, so any bacterial disease has the potential to take off. Pneumonia is likely to occur in flood-affected stock, especially if they have been swept away and get water into their lungs. Disturbance to the soil by floods may expose dormant bacteria and result in the emergence of many diseases seen infrequently in dry seasons such as 'mud scours' caused by *Yersinia*.

Salmonellosis may also occur due to stress and exposure to prolonged cold.

Flooding may also occasionally expose long-buried anthrax spores, resulting in unexpected incidents of anthrax. (However, on the whole, anthrax is just as common, if not more common in dry years.)

Wet conditions will result in a flare-up of footrot, if present, and foot abscesses and other foot problems will be common where animals' feet are constantly wet.

In cross-bred ewes grazing tall grass, mastitis can become a problem from the combined effects of udder engorgement due to lush feed, udder abrasions and flies.

5-in-1 vaccination is important after floods, as the sudden flush of feed will make stock susceptible to pulpy kidney, and the flood may bring to the surface the spores of other clostridia such as those causing black leg.

Similarly, leptospirosis vaccination is recommended, as leptospirosis is more likely to be a problem in wet seasons.

Skin diseases such as fleece rot, dermatophilosis (lumpy wool) and mud fever or rain scald, and other diseases that enter the body through skin wounds, such as erysipelas arthritis, may become more common if the animals' skin has remained wet for long periods.

Diseases that can be spread mechanically by flies, such as diarrhoea and pinkeye, are likely to become more widespread.

## Parasites

Worm larvae survive much longer on pasture in moist conditions, and parasite burdens may increase rapidly. Strategic drench plans relevant to the particular region should be adhered to and/or monitoring undertaken to demonstrate whether drenching has been successful, or is necessary, as the case may be. (See NSW DPI's Sheep health page at <http://www.dpi.nsw.gov.au/agriculture/livestock/sheep/health> for more information on drenches and parasites.) Western areas of NSW that seldom see problems due to parasites may start to see clinical disease, and producers should be watching for this possibility.

Protozoan parasites such as cryptosporidium also emerge in wet seasons, causing scouring in calves.

## Plant poisonings

Many plant poisonings only occur because stock are hungry, and have no access to alternative feed. When flood follows drought, it is imperative to assess the plants that have germinated first after the rain for their poisoning potential, before ceasing to provide fodder.

Fast-germinating plant species tend to be the most prolific following drought-breaking rains. Poisonings may be more frequent where a single species dominates the pasture. Most producers will be aware of the poisonous plants that occur in their region, and should be on the lookout for them – for example, phalaris staggers tends to be more common following good rains after a dry spell. In some cases, limiting exposure with careful grazing

management may be enough to avoid problems but in other cases this may not be possible, and alternative feeding arrangements may need to be made.

In more western areas, diseases such as floodplain (blown grass) staggers and tribulus staggers may be seen after years with no problems. In the case of floodplain staggers the poisonous part of the plant is the seed head, therefore either graze heavily in early spring to prevent or delay seed head development, or move stock off blown grass once seed heads have formed and are starting to mature.

Wet summers can encourage the widespread growth of panic grasses, and this can cause outbreaks of liver damage and photosensitisation in sheep, particularly young sheep. Other plants that may cause photosensitisation include St John's wort, buckwheat, and caltrop. (For more information see the Primefact [Photosensitisation in stock](#).) Treatment involves removal of stock from the affected paddock and provision of shade, preferably a dark shed.

If stock have grazed weeds that cause chronic liver damage such as Paterson's curse during drought, they will be more susceptible to photosensitisation when good feed is available.

Other poisonous plants that may cause problems include billy buttons (bachelor buttons), marshmallow, heliotrope, nardoo fern, pimelia and wild rape.

Rapidly growing plants that would normally not be toxic can also be a problem. Such plants include liverseed grass, lucerne, perennial rye grass, oats, etc. While nitrate and cyanide poisonings are probably more common in drought, they can occur in situations where the plants grow rapidly following good moisture and only develop a shallow root system. They are then prone to moisture stress if conditions become very hot, and wilting plants may contain toxic doses of nitrates or cyanide.

Where pasture is under water due to flood, poisoning from eating trees and shrubs such as lantana or green cestrum is probably a greater risk, as these may be the only feed available.

Another factor to consider following flood is the quality of stored feeds. Beware of feeding fodder or grain that has become wet and may have become mouldy. Some moulds can contain toxins such as aflatoxin that are extremely toxic to stock.

## Conclusion

Good seasons tend to favour disease-causing organisms and potentially poisonous plants, meaning that the problems these can produce can be at their most severe following flood. Producers are therefore advised to check stock regularly in the weeks following a flood, in order to detect these problems early, and take remedial action.

Hand feeding may need to continue for a period to reduce the risk of plant poisonings.

## Acknowledgement

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*Sheep being rescued by boat from a patch of high ground.*

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