International Dairy Topics

Dairyhealth BYTES

Your own reference source on dairy health

Number: 58

Biosecurity IX

Biosecurity of water

As was discussed in the last issue, the source of drinking water for your cows is important and it should be pathogen free. We then need to keep it this way until the cows drink it.

Before it reaches the farm

If the water stays in the pipe the whole time, its status should be maintained. If it is exposed to the outside world at any point then its status could be compromised, for example by faeces from wild animals or birds.

On the farm

The underlying principle on the farm is to keep the water piped and not exposed to possible faecal contamination. Therefore, we should:

- Avoid open storage reservoirs.

- Ensure that you know where all header tanks are and that they have vermin-proof lids. This is because it is possible for mice and lizards to come into the farm, fall into a header tank, decompose and release all their gut contents into the water.

Microbiological testing of water

It is not practical to test water for all bovine pathogens; neither does it make sense because the pathogen only has to breach the biosecurity system once to cause a disease outbreak. In other words, looking for disease-causing pathogens is like looking for the proverbial needle in a haystack.

However, there is a useful test for confirming that water is free from faeces. This is a microbiological test for faecal indicator bacteria. The organisms we test water for are enterobacteria. These have the advantage that they are easy to grow in a laboratory, are found in all animal faeces and can produce quantitative results in one day.

For assessing the quality of incoming water it is best to sample water before it enters the animal house. Water samples taken from the drinkers usually contain enterobacteria that have come directly from the animals (or from the bedding if the house is dusty) and therefore do not truly reflect the status of the incoming water. Likewise, header tanks in the same air space as your animals can be contaminated by dust-borne enterobacteria.