Using animal behaviour to detect disease in cattle

The Challenge

Disease is a major cause of poor animal welfare, loss of productivity and low eff ciency on dairy farms. Many diseases are endemic, but if we were able to detect disease early, this would reduce the impact on the welfare of the affected animal, transmission of the disease to pen-mates, use of antibiotics and lost earnings for the farm..

The Research

It is well-recognised that ill-health in animals and humans is accompanied by changes in behaviour, such as loss of appetite and lethargy. A study by Gonzalez et al (2008) using data from the Langhill herd at Crichton Royal Farm was one of the f rst studies to show that changes in behaviour could be used in an on-farm setting to detect disease. Data from the Langhill database on feed intake patterns was coupled with cow health records. Further work had been done to determine whether changes in feeding behaviour and activity can be used to detect respiratory disease in calves.
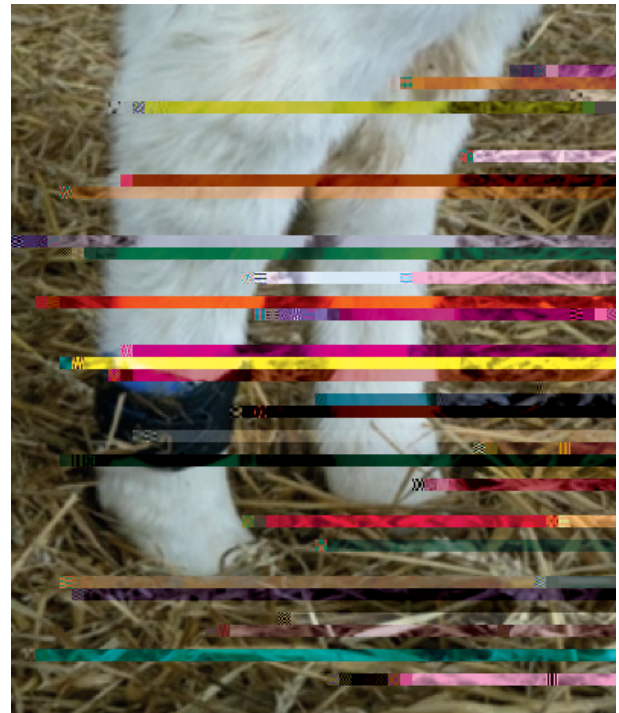
The Results

The analysis from Gonzalez et al (2008) showed that lame cows ate for a shorter time each day, ate more quickly and had fewer feeding bouts. These changes were evident in the feeding patterns before the farm staff had identified that the cow was lame. Similarly, the study of feeding behaviour and activity in calves showed that calves with respiratory disease spend more