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BVDV or Pestivirus – PI Calves

This year we have had a few herds discover the presence of a persistently infected (PI) pestivirus calf or yearling in their young stock – these animals are generally poor doers who respond poorly to treatment for various illnesses. They often (although not always) die or are culled young – with many not making it into the milking herd.

A persistently infected animal is one which is effectively born as a virus factory for pestivirus. Their immune system fails to recognise that the virus is not 'self' and hence fails to mount an immune response to fight the virus – it will therefore shed large quantities of the virus and be a source of infection for other calves/cows on the farm.

Animals become persistently infected when their mother (dam) is exposed to the virus for the first time whilst they are pregnant (between approximately 1 month and 4 months in calf).

Why is this important? Having an animal constantly shedding virus is a potential hazard for a number of reasons:

- Increased immune challenge for animals they are housed with; we believe this has serious implications for calves reared in the dairy system and can predispose to them to more severe illness when faced with infections (such as calf scours or pneumonia).
- Potential to expose naïve heifers/cows whilst they are pregnant and produce more PI's (which are likely to die or be culled young).

How are PI's diagnosed? A small ear notch is taken to test for the presence of pestivirus antigen. These tests are extremely effective at picking up PI animals and are also very cost effective at ~\$17 per animal.

We have seen a few unfortunate cases where a naïve herd were exposed for the first time when a large proportion of cows were between 1 month and 4 months in calf - with large numbers of PI calves subsequently diagnosed in their offspring. This has seriously affected replacement heifer numbers for these farms in the following few years and resulted in quite a long process to identify and eliminate the potential source of exposure.

We recommend at a minimum monitoring your herds' exposure to pestivirus via a regular bulk milk test. This provides a snapshot of your milking cows' immunity to pestivirus and can indicate if it is likely a PI has entered the milking herd. It can also help us decide if vaccinating your herd would be a beneficial option. At \$50 per bulk milk test, this is a very cost-effective option for monitoring a whole herd of cows.