

Background

- The purpose of paired serology testing is to determine if an animal has sero-converted when exposed to a pathogen.
- Defined as a *four-fold increase in antibody titre or a change in serological status*.
- The test is best employed to determine sero-conversion in a herd, therefore it is better to sample a number of animals.
- It provides veterinary surgeons and farmers with a more accurate timeline of infection in a herd.
- May also be used as an aid to assess vaccination efficacy.
- Please note that possible effects of maternally derived antibodies (MDA) should be considered when interpreting results.

Sampling method

- Two blood samples must be taken from the same animal 3-4 weeks apart.
- Label the samples with the animal number and record on the submission form as 'first pair' and send to AFBI with the completed form (see link below).
- 3-4- weeks later bleed the same animals again, identify samples with animal numbers, and send this with the appropriate paperwork to AFBI marked as 'second pair'.
- AFBI will hold the first pair sample until the second is received.
- Both samples are then tested concurrently in a 'pair' test to determine changes in antibody levels between the first 'acute' sample and the second 'convalescent' sample.

Testing and results

- Serology methods are standardised in order to calculate antibody titres and then determine if antibody titres have increased four-fold between first and second pair.
- Serology methods are also used to determine if the animal has changed from a negative to positive antibody result between first and second samples.
- Within 10 working days of receipt of the 'second pair' sample the vet will receive a detailed report indicating if the animal has sero-converted.

Useful links.

- AFBI website: <https://www.afbini.gov.uk/>
- Forms and publications: <https://www.afbini.gov.uk/publications/type/forms>
- Farm animal submission form:
<https://www.afbini.gov.uk/publications/farm-animals-diagnostic-submission-form>