

Infectious Bovine Rhinotracheitis (IBR)

IBR is a respiratory disease caused by a bovine herpes virus, these have the ability to cause latent infections which flare up at times of stress (similar to the ones causing cold sores in people)

Clinical signs

Herds that are endemically infected with IBR will often show few overt clinical signs but will see large effects in reduced yield and fertility.

Disease is much more severe in naïve herds or naïve animals entering an endemically infected herd (such as heifers that have been raised away from the main herd). These animals may show the below signs;

- pyrexia (high temperature)
- runny nose and eyes
- ulceration of mouth and nose
- decreased appetite
- reduced milk yield
- coughing and often secondary bacterial pneumonia
- abortion and death in severe cases



Transmission

IBR can be transmitted by direct routes (nasal and genital secretions) and by indirect routes (people and equipment). Once animals are infected the virus hides from the immune system in the nervous system meaning that it can never be removed from the body and thus the animal is infected for life. At times of stress such as; calving, changes in diet or housing, the virus is reactivated and the cow will shed the virus infecting others within the herd. The main method of introduction of IBR to a herd is via buying in infected animals so always ensure your biosecurity is adequate.

Diagnosis

A definitive diagnosis can be made based on a blood test, identifying antibodies to the virus. This test is highly sensitive therefore it will identify most positive animals. If two blood tests are taken then rising antibody levels indicates active infection/ reactivation of the virus. Antibodies can also be detected on bulk or individual milk

samples. Nasal and conjunctival swabs can be used to detect the virus by PCR.

Treatment

There is no direct treatment for IBR. Antibiotics can be used to treat any secondary bacterial infections. Vaccination, in the face of an outbreak, has been proven to reduce spread of the virus. Any cows affected should be isolated and may require nursing care and non-steroidal anti-inflammatories.

Control

If you are free of IBR then you should avoid buying in animals apart from accredited IBR-free herds. You should also ensure that your biosecurity is up to date.

Once IBR has been identified in the herd you can reduce spread by:

- Operating a test and cull scheme whereby you periodically test cattle for antibodies and remove any positive animals from your herd. This may not be practical when a large proportion of the herd is affected
- Using vaccination

There are several factors to consider when using vaccines

- Vaccination causes antibody production by the animal. This allows the animal to fight future infection, reducing the severity of clinical signs and shedding. IBR marker vaccines cause a different antibody to be produced compared with wild type infection. There are two types of marker vaccine; Live, best for stimulating protection against infection, and the inactivated; best for reducing reactivation of the virus.
- Animals vaccinated before 3 months can't be thought of as completely protected due to the effect of maternally derived antibodies, therefore when vaccinated prior to 3 months of age an additional vaccine is given at three months of age
- Duration of immunity after the primary course for the live vaccine is 6 months, inactivated is 12 months

There are several vaccination protocols, all of which are appropriate in different scenarios. Speak to your vet to discuss testing to establish your IBR status within the herd and which vaccination protocol would be most appropriate.

