

IBR - the disease

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IBR (Infectious bovine rhinotracheitis) is a highly infectious disease caused by a virus called bovine herpes virus-1 (BoHV-1). IBR has worldwide distribution and in addition to the impact on health and productivity also affects the trade of animals, semen and embryos.

In Ireland, IBR is mostly involved in respiratory infections, being one of the viral agents involved in the Bovine Respiratory Disease (BRD) complex. Infection with this virus is widespread in Ireland, with an estimated 75-80% of both beef and dairy herds containing animals that have been infected.

Cattle with IBR have a watery discharge from the nose and eyes and may present with red nose and eyes. Affected animals may be dull, off their feed and have a high temperature (107-108°F/41.7-42.5°C) and lack of appetite. The severity of the clinical signs is influenced by a number of factors, including whether the animal has other infections, degree of stress and age. Disease is typically milder in dairy herds where milk drop can be a significant feature, and more severe in beef units in the absence of immunity.

Animals that survive infection recover but develop a 'latent' or hidden infection, becoming lifelong carriers. This latent infection typically becomes established in the nerve cells within the animal's brain. During this latent period the carrier is not shedding virus. However, at times of stress such as transport, calving, nutritional stress or mixing of stock, the virus may be reactivated and can begin to multiply and be re-excreted, generally from the nose and eyes. This leads to new infections in other susceptible cattle, which in turn will also become latent carriers. These latently infected carriers play a central role in maintaining IBR in infected herds, where they act as a reservoir of infection, and in spreading infection between herds.

The nasal discharge from infected animals can contain very high levels of virus and as a result infection can spread rapidly through a herd when susceptible cattle come in contact with infectious cattle or items contaminated by them such as feeders and drinkers. It can also be shed from the reproductive tract, including semen, resulting in venereal transmission. Airborne spread may also occur over distances of up to 5m.

How to find out whether I have IBR in my farm?

A bulk milk antibody test (BMT) can be used as an initial screening test for a dairy herd. Negative marker (gE) bulk milk results with current kits will be typically obtained in herds where less than 10-15% of the milking cows are latently infected and there is little or no virus circulation. Note that the gE test result is not affected by vaccination. Antibody levels in the bulk milk will increase if the virus starts spreading within the milking herd. A positive bulk tank milk result will be obtained in herds with moderate to high prevalence of latently infected animals.

In beef herds, a cost-effective means to obtain an initial indication of the level of infection in a given herd can be achieved by applying a 'snap shot' test. This requires the sampling of 20-30 randomly selected animals over 9 months-old that are used or intended for breeding. It is important to include animals of all ages and groups in this testing to obtain a result that truly reflects the status of the herd. As with the BTM, a positive snap shot result (two or more positive animals) will indicate that the proportion of seropositive animals in the herd will typically be >15% and a negative result will indicate that it will typically be 0-15%, with the overall results giving an estimation of the prevalence of carrier animals in the herd.

The bulk tank milk and snap shot tests can be used to get an initial indication of the within herd prevalence, providing information to better manage risk, improve biosecurity and inform decisions on vaccination at herd level.

Where to get more advice on IBR?

Detailed information leaflets on IBR and herd biosecurity, along with answers to frequently asked questions on IBR and specific guidance for herds with bull calves that are potential AI sires, are available [here](#).