



Testing for Brucellosis 2019

Background

Brucellosis in cattle is caused by *Brucella abortus*. As the scientific name suggests, the most common clinical sign of bovine brucellosis is abortion in pregnant animals. The disease caused substantial economic losses, animal welfare issues and public health concern in past decades, but was officially eradicated from Ireland in 2009.

To demonstrate freedom from bovine brucellosis to trading partners, Ireland carries out extensive testing on its cattle population each year.

Active surveillance

Ireland's active surveillance programme to demonstrate freedom from *Brucella abortus* is guided by the OIE terrestrial animal health code, with Articles 8.4.4, 1.4.4 and 1.4.5 being among the most relevant for implementation of the surveillance programme.

To demonstrate freedom from brucellosis in cattle, Ireland tests cull cows which are sampled as they pass through slaughter plants. Cull cows are considered a high risk group for brucellosis if it is present in a country, and so are considered an appropriate category to test. A two stage sampling approach was taken for demonstration of freedom from brucellosis in 2019. Accordingly 15,593 cull cows from 15,593 different herds were tested for brucellosis using a screening ELISA test. A further 1,544 samples, which generally represent duplicate sampling within herds, were tested, meaning that 17,137 samples were tested altogether. Additional confirmatory CFT testing was carried out in a small number of cases. Samples were collected from October 2019 to early February 2020, and testing was carried out by the Department of Agriculture, Food and the Marine (DAFM) in its Blood Testing Laboratory in Cork. All cull cow samples were deemed to test negative for *Brucella abortus* under this protocol, thus providing evidence to substantiate Ireland's continuing freedom from brucellosis.

Passive surveillance

It should be noted that the active surveillance outlined above is supplementary to the passive surveillance which Ireland regards as its mainstay in detecting incursions of exotic disease.



Brucella abortus is a notifiable disease in Ireland, meaning that anyone who suspects that an animal may have the disease is legally obliged to notify DAFM (under SI 130 of 2016). In addition, it is a legal requirement to notify DAFM of any case of abortion in a bovine animal (under SI114 of 1991). DAFM also operates a network of regional veterinary laboratories, strategically located around the country. Farmers and private veterinary practitioners (PVPs) submit large numbers of samples, including aborted foetuses, to the laboratories every week. DAFM is confident that these parallel systems provide effective surveillance with regard to detecting an incursion of brucellosis. An estimated 3,412 brucellosis tests were carried out on blood samples from bovine animals following abortion events in 2019; all test results were negative.

Farmers are encouraged to have their PVP examine and test cows and sheep which have aborted, to report suspicions of brucellosis in either species to their local Regional Veterinary office, and to make use of their local Regional Veterinary Laboratory to aid with diagnosis of disease conditions.

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