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Enzootic Bovine Leukosis

Background

Enzootic bovine leukosis (EBL) is caused by a retrovirus, the bovine leukaemia virus (BLV). The disease is also known as enzootic bovine leukaemia in some areas. Ireland is free of enzootic bovine leukosis.

A minority of animals infected with the BLV virus develop clinical signs including enlarged lymph nodes, tumours in the abdomen and in other body parts, weight loss and anaemia. Most affected animals reach the age of two before showing any signs of the disease. Animals usually become seropositive to the BLV virus four to twelve weeks after exposure. In countries endemically affected by EBL, substantial losses can occur due to trade restrictions on breeding animals, production losses on farm, and carcass condemnation at slaughter.

Active surveillance programme

The purpose of Ireland's active surveillance programme for EBL is to demonstrate freedom from the disease. EBL is under the umbrella of the Animal Health Law and Ireland is listed in Commission Delegated Regulation 2021/429 annex IV, part 1 as being free of disease. EBL's surveillance is guided by Commission Delegated Regulation (EU) 2020/689 and by WOAH recommendations for surveillance for retention of freedom from EBL found in Article 11.6.2 of the terrestrial animal health code. Samples for Ireland's active surveillance programme are collected from female animals aged over thirty months (mainly cull cows) passing through slaughter plants.

A two stage sampling approach was taken for demonstration of freedom from EBL in 2019. Accordingly 15,593 cull cows from 15,593 different herds were tested for EBL using a screening ELISA test. A further 1,544 samples, which generally represent duplicate sampling within herds, were tested. Therefore 17,137 samples were tested altogether. Samples were collected between October 2019 and early February 2020, and EBL testing was carried out in the Blood Testing Laboratory, operated by the Department of Agriculture, Food and the Marine (DAFM) in Cork. All animals sampled were confirmed negative for EBL. This result demonstrated that Ireland is free of the disease, this disease freedom has been maintained to date. In 2023 samples were taken from 17,790 cull cows and tested for EBL. These results maintain Irelands disease free status.

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.

EBL is a notifiable disease in Ireland, meaning that anyone who suspects that an animal may have the disease is legally obliged to notify DAFM. 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 carcases from fallen animals, to the laboratories every week. Furthermore, all parts of slaughtered bovine animals are subjected to veterinary post-mortem examination at meat plants. Tumours detected in bovine animals on post-mortem inspection are submitted to DAFM's central veterinary research laboratory for analysis, to verify that the tumour has not been caused by EBL. DAFM is confident that these parallel systems provide effective surveillance with regard to detecting an incursion of EBL. Farmers are encouraged to have their PVP examine and test cows and sheep which show clinical signs consistent with EBL, to report suspicions of EBL to their local Regional Veterinary office, and to make use of their local Regional Veterinary Laboratory to aid with diagnosis of disease conditions occurring on their farms.

Thanks to the Blood Testing Laboratory in Cork for providing the figures for numbers tested under the active surveillance programme.

Last updated: 02nd July 2024