

Viral P32 Gene Targeting Conventional PCR For the Detection of Infectious Laryngotracheitis Virus in Commercial Broiler and Layer Farms in Kurunegala District

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Highly contagious respiratory disease of poultry called Infectious Laryngotracheitis (ILT), is caused by the Gallid herpesvirus 1, a member of the family *Herpesviridae*. It primarily affects chicken but can also infect turkeys and pheasants. Clinical signs of ILT include coughing, sneezing, nasal discharge, dyspnea, expectoration of blood and a drop in egg production. The virus is spread through direct contact with infected birds, as well as through contaminated equipment, feed, and water sources. ILT can have a significant economic impact on the poultry industry due to decreased egg production, increased mortality rates, and the cost of treatment and control measures. This study was conducted in the Kurunegala district of Sri Lanka to identify the prevalence of ILT in commercial broiler and layer farms using a conventional PCR method to detect the p32 gene of the ILT virus. Tracheal and lung samples were collected, using convenient sampling technique from 30 dead birds that showed respiratory signs, and DNA was extracted from these samples using a commercial kit and subjected to conventional PCR. The results showed that 6 out of the 30 samples tested positive for ILT, giving a prevalence rate of 20% in the district. These findings suggest that Kurunegala may be a potential hotspot for ILT, possibly due to the high poultry population in the district. Since there is currently no vaccination program for ILT in Sri Lanka, these results highlight the need for implementing a vaccination program and improving biosecurity measures in poultry farms. Future studies should focus on determining the prevalence of ILT in different districts and how the disease pattern varies according to different factors such as farm management practices and environmental conditions. This information will be crucial in developing effective control strategies to prevent and manage ILT outbreaks in poultry farms.

Keywords: Infectious Laryngotracheitis (ILT), Polymerase Chain Reaction (PCR), Poultry, Kurunegala, Vaccination